

# TECHNICAL PROPOSAL



**ARLINGTON  
MASSACHUSETTS**



**RFP #21-28  
MINUTEMAN  
BIKEWAY  
PLANING PROJECT  
June 9, 2021**



**Submitted to:  
Town of Arlington  
730 Massachusetts Avenue  
Arlington, MA 02476**

**Submitted by:  
Kittelson & Associates, Inc.  
33 Arch Street, Suite 1700  
Boston, MA 02110  
617.377.4000**









33 ARCH ST, SUITE 1700  
BOSTON, MA 02110  
617.377.4000

Adam W. Chapdelaine, Town Manager  
Town of Arlington  
730 Massachusetts Avenue  
Arlington, MA 02476



RE: RFP #21-28 Minuteman Bikeway Planning Project

Dear Mr. Chapdelaine,

Kittelison & Associates, Inc. (Kittelison) and Greenman-Pedersen, Inc. (GPI) are pleased to submit the following proposal for the Minuteman Bikeway Planning Project. The Minuteman Commuter Bikeway is an incredible resource for transportation and recreation, which is evidenced by the constant streams of commuters, children riding home from school or to one of the multiple adjacent parks, and families out for a stroll. We have organized a highly qualified team of local and national experts in multimodal and trail design who can provide the Town of Arlington with the knowledge and collaboration needed to address current challenges on the Bikeway and position the Town with long-term strategies for ongoing success. Both Kittelison and GPI benefit from the resources and expertise afforded to national firms while bringing extensive knowledge of the local context and players with our Boston (Kittelison) and Wilmington (GPI) based offices.

Our team is taking a highly integrated approach to meeting the unique needs of this project, drawing on our collective expertise as transportation and placemaking professionals. Kittelison will lead the project team, capitalizing on our firm's planning and design experience and expertise in multimodal transportation design. GPI will provide placemaking vision and design expertise, contributing landscape architects to the team as well as specialized civil engineers for lighting and bridge assessment tasks. The Kittelison and GPI partnership brings complementary insight that will enhance access to the Bikeway as well as ensure safety, comfort, and connectedness for all who wish to use it. Both of our firms excel at working with communities through challenging projects, and we look forward to collaborating with the DPCD, the Arlington Bicycle Advisory Committee, and the many stakeholders invested in the positive outcome of this project.

On a personal note, our team is composed of professionals who bring technical expertise alongside genuine out-of-the-office enthusiasm for safe and accessible multimodal networks and quality recreational facilities that allow communities to thrive. I (Elizabeth Flanagan, AICP) will serve as project manager for this contract. As a relatively new Arlington resident but long-time Minuteman Bikeway user, I am excited to present this team and scope for consideration. I will work directly with Conor Semler, our project principal, and Hermanus Steyn, PR. ENG., PE, our quality manager.

Please find the following qualifications within our proposal:

- Overview of how we meet the Minimum Consultant Qualifications and Submittal Requirements
- Acknowledgment of the Selection Criteria
- Firm descriptions and general experience
- Project experience
- Scope of Services approach
- Proposed schedule
- Organizational chart and staff resumes
- References
- Other information
- Forms
- Insurance information

Thank you for this opportunity to submit our qualifications to assist the Town of Arlington and DPCD in developing a feasible and attractive Minuteman Bikeway trail. Please contact me at [eflanagan@kittelison.com](mailto:eflanagan@kittelison.com) with any questions.

Sincerely,  
Kittelison & Associates, Inc.

DocuSigned by:

*Elizabeth Flanagan*

—E08801CEA580479...  
Elizabeth Flanagan, AICP  
Planner & Project Manager

DocuSigned by:

*Conor Semler*

—5A6F4DBE77134EE...  
Conor Semler  
Associate Engineer & Project Principal





*"When I see an adult on a bicycle, I do not despair  
for the future of the human race." - H. G. WELLS*

DEDICATED TO THE MEMORY OF  
JOHN G. WALD (1930-1996),  
local supporter of the Minuteman Bikeway,  
passionate cyclist and advocate  
for a sustainable future.

MEMORIAL FUNDED BY DONATIONS TO THE  
MASSACHUSETTS BICYCLE COALITION (MASSBIKE).



# MINIMUM QUALIFICATIONS, SUBMITTAL REQUIREMENTS, & SELECTION CRITERIA

## MINIMUM SUBMITTAL REQUIREMENTS

The firm/project manager/team must have at least five (5) years of experience in one of the following practice areas: alternative transportation modes focused on bicycle/pedestrian planning, urban design and landscape architecture, engineering on projects of similar size and scope, with a particular emphasis on trail or shared-use path planning.

**Our project manager, Elizabeth Flanagan, AICP, has five years of experience** in bicycle and pedestrian planning as well as notable expertise in complete streets design and shared-use path planning. **Our project principal, Conor Semler, has 14 years of experience** in bicycle and pedestrian planning, urban design, and shared-use path planning. Both Conor and Elizabeth have worked on multiple projects of similar size and scope for clients like the Town of Winthrop, City of Somerville, City of Medford, and City of Boston, Massachusetts.

The firm/project manager/team must have at least five (5) years of community engagement and outreach experience

The Kittelson team has extensive experience with community engagement and outreach, which is outlined below:

- Elizabeth Flanagan, AICP: 5 years
- Ronald Headrick, RLA: 35 years
- Conor Semler: 14 years
- Michael Shustack, PE: 1 year
- Hermanus Steyn, PE: 28 years
- Nicole Rogers, PE: 7 years
- Radu Nan, PE: 16 years
- Sage Winter, ASLA, PLA: 3 years
- Margaret Kent: 4 years

Our team of key staff will be supported by local analysts with exposure to community outreach programs and experience participating in outreach efforts and/or meetings.

The firm/team must have previous experience in similar projects. Successful completion of a minimum of three (3) similar projects within the last five (5) years is required, and completion of five (5) overall is desired.

Kittelson and GPI's relevant project experience from the last five years is outlined on pages 6-8.

The principal and project manager to be assigned to this project must be available for meetings with the Town on days or evenings, as required

Elizabeth and Conor are both available for meetings with the Town on days or evenings.

The firm/team must have proven experience in the public and/or private sector and in working with municipalities, particularly planning and community development departments.

Kittelson has worked with the following local municipalities, jurisdictions, and departments:

- City of Boston Transportation Department, Planning and Development Agency, and Public Works
- City of Cambridge Department of Public Works and Traffic, Parking & Transportation Department
- City of Somerville Mayor's Office of Strategic Planning & Community Development
- City of Lynn Department of Community Development and Office of the Mayor
- City of Medford Engineering Division
- City of Pittsfield Department of Community Development and Department of Public Services & Utilities
- Town of Sterling Planning Department
- City of Holyoke Planning and Economic Department
- Fall River Department of Mass in Motion and Department of Traffic & Parking
- Foxborough Department of Public Works and Department of Planning
- MassDOT
- MassTrails

The volume of the proposed project managers and firm's current and projected workload must not adversely affect its ability to immediately initiate work and to follow through with the project in a timely and professional manner. The firm and all team members must be current staff members and capable of devoting a significant amount of time to this project in order to complete the work within the schedule outlined in this RFP.

E. Flanagan, AICP	35%	J. Lynch	40%
C. Semler	30%	B. Helm	40%
H. Steyn, PE	20%	R. Headrick, RLA	15%
R. Nan, PE	35%	M. Shustack, PE	15%
M. Kent	35%	N. Rogers, PE	20%
M. Morrow	40%	S. Winter, ASLA, PLA	25%

The Kittelson/GPI team is prepared to dedicate the time and resources necessary to successfully achieve this project's goals. A matrix outlining all staff availability is to the right. Individual staff availability is also included with each team member's resume.









## MINIMUM SUBMITTAL REQUIREMENTS

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## SELECTION CRITERIA

Staffing Plan, including the professional qualifications of all project personnel with particular attention to training, educational background, professional certification or registration, and professional experience. Demonstrated expertise and experience of the Principal-in-Charge, Project Manager, and other key personnel, and any Consultants to be assigned to the Project, including professional registration of the Consultants and their qualifications. The Plan of Services should be detailed and logical, and demonstrate efficiencies and creativity in completing the project.	 <b>DETAILED</b> <b>ON P. 22-34</b>
Depth of experience in alternative transportation modes focused on bicycle/pedestrian planning, urban design and landscape architecture, engineering on projects of similar size and scope, with a particular emphasis on trail or shared-use path planning.	 <b>DETAILED</b> <b>ON P. 6</b>
Responsiveness of proposal, including a demonstrated understanding of all project components, creativity in addressing trail and shared-use path issues, and public outreach needs.	 <b>DETAILED</b> <b>ON P. 9-21</b>
Strength and credibility of client references. The Consultant shall demonstrate prior client satisfaction with working relationship, project management capabilities, meeting project budget and schedule, and technical expertise in developing similar projects. References should aim to include clients who have worked with the designated Principal and/or project manager.	 <b>DETAILED</b> <b>ON P. 35-36</b>

## FIRM DESCRIPTION AND GENERAL EXPERIENCE

**KITTELSON & ASSOCIATES** Kittelson provides comprehensive transportation planning, engineering, and research services to government and private organizations. Kittelson's skilled professionals and national experts offer decades of progressive research, technological innovation, and industry-leading work. Founded in 1985, Kittelson is composed of over 260 professionals in 25 offices across the US. We have a significant local presence in Massachusetts due to our Boston office. We recognize that healthy, sustainable places depend on efficient, active, and safe multimodal transportation that is cost-effective to manage, operate, enhance, and use. Kittelson assists clients by thoughtfully developing shared-use path networks that help ultimately build sustainable, equitable, and healthy communities.

For this project, Kittelson is teaming with Greenman-Pedersen, Inc. (GPI), a trusted partner with expertise in trail planning, bridge design, and landscape architecture.

**GPI** Founded in 1966, GPI is a leading consulting firm that specializes in the innovative design and construction of transportation infrastructure and building projects. Their staff of over 1,500 employees in 53 offices provide comprehensive engineering, design, planning, landscape architecture, survey, and construction management services to a wide variety of government agencies, municipalities, institutions, industries, corporations, private organizations, and developers. GPI's extensive experience includes the design and construction of multi-use trails, complete streets, and bicycle accommodations.

As a firm recognized in the Engineering News Record as one of the Top 65 design firms in the US, GPI prides themselves on maintaining relationships by providing exemplary services and work products. The New England Division of GPI is headquartered in Wilmington, Massachusetts, and maintains regional studio offices in Portsmouth, Bedford, and Salem, New Hampshire in addition to Portland, Maine.





**Our locally-based team will provide responsive and reliable services to the Town or Arlington. Kittelson and GPI offer the following advantages:**

### Proven Delivery

Kittelson has a proven track record of bringing projects to completion on schedule and within budget, and we are known by our clients for being prompt and budget efficient. We provide quality products that meet and exceed each client's expectations and result in client satisfaction. We will leverage our strong project management qualifications as the prime on this team to ensure successful delivery to the Town of Arlington.

### Multimodal & Complete Streets Experience

Nationwide, Kittelson has helped agencies develop, test, and apply measures to monitor the performance of state transportation systems, with particular emphasis on mobility for people and freight across all modes. Kittelson professionals provide engineering expertise with planning and design sensitivity to complete streets that expand mobility options, spur economic growth, increase independent living, improve safety for all users, support sustainable growth, promote healthy activity, and increase community interaction. Working with residents, business leaders, and elected officials, Kittelson has successfully created complete streets vision plans and guidelines and have carried these to implementation in urban, suburban, and rural environments nationwide. Additionally, Kittelson's innovative and extensive pedestrian and bicycle planning and design experience includes the development of studies and guidebooks, as evidenced by our contributions to such projects as the NACTO *Urban Bikeway Design Guide*, FHWA *Separated Bike Lane Planning and Design Guide*, and more.

### Massachusetts Experience

In Massachusetts, Kittelson has worked with over 25 public sector clients, including the City of Boston Transportation Department; Boston Planning and Development Agency; Boston Public Works Department; Massachusetts Bay Transportation Authority; Massachusetts Department of Transportation; and the cities of Holyoke, Pittsfield, Lynn, Haverhill, Somerville, Cambridge, etc. Our extensive MassDOT experience includes projects such as the MassDOT *Shared Use Path Design Guide*, MassDOT Complete Streets On-Call, MassDOT Guide for the Planning and Design of Roundabouts, Gardner Safety Improvements, MassDOT FREEVAL WorkZone Analysis, and more. GPI also has a strong Massachusetts presence, with offices in Wilmington and Southbridge, and works closely with municipalities and state agencies.

### Shared-Use Path Experience

A successful, well-designed shared-use path serves all modes and is a safe and encouraging environment for its most vulnerable users. Kittelson has helped agencies nationwide plan and design shared-use paths, particularly in constrained urban and suburban contexts. Working with residents, advocacy groups, and municipal staff, we have helped communities reallocate space within the public right-of-way to create new active transportation and recreation corridors and to design shared-use-path crossings and intersections that increase safety and minimize conflicts between modes. Kittelson and GPI are on a team working with MassTrails to develop the MassDOT *Shared-Use Path Planning and Design Guide*, which included a study of walking and biking on the Minuteman Trail. GPI has been involved in the design of multiple shared-use paths and rail trails in Massachusetts, including the Bradford Rail Trail and the Bruce Freeman Rail Trail.

### Ability to Work as a Project Team

Informed by our experiences developing implementable multimodal project ideas in partnership with Planning, Community Development, and Public Works departments throughout the state, we are adept at providing a streamlined process, focusing on the critical path towards deliverables and relying on our understanding of relevant stakeholders and processes for municipal projects. Our team of designers works independently while under the consolidated direction of our project management team. For this contract, Elizabeth Flanagan, AICP, will serve as the project manager and will work directly with our technical reviewer, Radu Nan, PE, who will ensure consistency and appropriateness of conceptual design. Supporting the team is our project principal, Conor Semler.



Kittelson has a national reputation for planning, designing, and developing guidance for shared-use paths. Kittelson has planned and designed shared-use paths around the country in a variety of contexts, serving a variety of users, and overcoming a variety of challenges. This vast experience, including the development of shared-use path guidance for Massachusetts and Maryland, has led to a series of key elements Kittelson thoughtfully considers during the planning and design stages of every shared-use path.

Our team has been compiled with careful consideration of the safety, comfort, and aesthetic aspects of the Minuteman Bikeway Planning Projects. Kittelson brings experience planning shared-use path and trail connections and designing multimodal facilities. The Kittelson team has particular experience designing the transitions at intersections and between on- and off-street facilities, a key component of the project's scope and need. Our teaming partners at GPI bring a long history of trail design as planners, engineers, and landscape architects, with focus on placemaking and ADA accessibility on off-street connections. A few of our recent relevant projects are listed below.

### **PALISADES TROLLEY TRAIL FEASIBILITY STUDY | WASHINGTON, DC | 2018-2020**



The Palisades Trolley Trail is located along the DDOT-owned right-of-way (ROW) of the former Glen Echo Trolley Line. The trolley line was abandoned in the 1960s and the ROW has operated as an informal and disconnected walking trail behind homes in Palisades and Foxhall. The one remaining bridge, the Foundry Branch Trolley Trestle Bridge, was in danger of collapse and DDOT considered converting the trolley bridge into a bicycle-pedestrian bridge connected to a multi-use trail as proposed in moveDC, DDOT's long range transportation plan.

Kittelson assembled a consultant team to evaluate the issues and challenges in developing a multi-use trail. Due to the complex land ownership, divergent stakeholder interests, active utilities, and unstable condition of the Foundry Branch Bridge, a comprehensive understanding of the study area was critical

to determining the feasibility of the potential trail. The consultant team completed topographic, utility, and field surveys of the trail area, and completed concept-level designs for trail alignments, trail crossings, new trail bridges, connections to other trail networks, and trail rehabilitation options for the existing Foundry Branch Trestle Bridge. The feasibility of the concept designs were evaluated based on cost, property impacts, required permitting, and facility comfort. Kittelson provided DDOT with a comprehensive analysis of the issues and opportunities associated with constructing a trail in four phased projects throughout the study area. The study identified many constraints associated with the full build-out of the trail; this analysis helped DDOT determine that construction of the full trail alignment was infeasible, and it allowed DDOT to focus on advancing viable segments of the trail that would advance connectivity at a much lower cost.

Kittelson led the coordination with multiple agency stakeholders who own property along and adjacent to the proposed trail, including the National Park Service (NPS), Georgetown University, WMATA, and DC Water. Kittelson engaged with the public through use of widely attended public meetings, open house information boards, focus group discussions, question and answer sessions, an online survey, an online comment map, and neighborhood ANC meeting updates. As a result of this outreach and received information, DDOT was able to be responsive to the community and designed the trail to accommodate lower-speed local bicycle traffic while providing a connection to the nearby Capital Crescent Trail to accommodate higher-speed commuter cyclists.

### **MASSDOT SHARED-USE PATH PLANNING AND DESIGN GUIDE II STATEWIDE, MA | 2017-ONGOING**

MassDOT, in cooperation with the MassTrails program, is developing a Shared Use Path Planning & Design Guide to inform the planning, design, and construction of shared use paths in Massachusetts. Kittelson is a subconsultant on the team developing the guidance content and led the development of the Shared Use Path Planning Primer, an initial publication which helps technical and non-technical audiences learn how to propel shared use path projects from vision to reality by demystifying the steps of planning, designing, funding, and constructing shared use paths. The project team is currently developing the full guide, which will include the following topics: shared use path benefits to communities; planning process; design and construction, including cross section, geometry, traffic control, intersections and crossings, structures, and landscape design; performance evaluation. Kittelson is leading the development of the intersection and crossing design guidance and performance evaluation sections, and recently completed shared use path benefits research conducted as part of a separate contract with MassDOT which has been published.

During the course of this project, the MassTrails inter-agency team was formed, MassDOT guidelines on publication formatting were updated, and the project team has coordinated with the concurrent development of multiple other guidance documents, including an update to the MassDOT Project Development and Design Guide. The project team has maintained momentum by prioritizing collaboration with the client and prime and through a flexible and nimble document development process.



## LYNN BICYCLE AND PEDESTRIAN NETWORK PLAN | LYNN, MA | 2018-2019



The City of Lynn, Massachusetts, is the last leg of the Northern Strand Community Trail, a 10-mile shared-use path along an abandoned rail bed. In addition to this coming investment by the state, there have been multiple grassroots efforts within the community that aim to implement multimodal improvements and better connectivity among in-town neighborhoods. The Lynn Walking and Bicycling Network Plan bridges these two scales and ties in with the state-led effort of connecting five communities through the Northern Strand Community Trail (Northern Strand).

Coordinating with separate but parallel efforts by the Executive Office of Energy and Environmental Affairs (EEA), Kittelson developed the Lynn Walking and Bicycling Network Plan (Network Plan), which integrated both

regional and local scale planning efforts, assessed route alternatives, identified the preferred route for the Northern Strand in Lynn, and provided design concepts for multimodal improvements for the coastal town of Lynn. The Network Plan was produced through a series of interactive multi-day public workshops, web-based engagement, and continuous feedback garnered from social media postings, face-to-face interactions, and responses.

The Network Plan is a 'blueprint' for current and future planning efforts to improve the walkability and bikeability of Lynn. The Network Plan informs continued infrastructure efforts by the City to support the communication of deliberate planning and implementation through both public and private investment in Lynn. At this stage, the Network Plan focuses on a two-way separated bicycle facility through Lynn with the terminus at Lynn Shore & Nahant Beach Reservation. Tied to this proposal are pedestrian treatments, such as raised crosswalks, a bicycle traffic light on the intersection of Market Street and Lynnway, and recommendations for traffic calming and expanding the network for multimodal connectivity.

## WINTHROP GREENWAY FEASIBILITY STUDY | WINTHROP, MA | 2020-2021



The Mary Ellen Welch Greenway (MEWG) is a linear recreational open space in East Boston originating at the historic Jeffries Point Waterfront and from there passing through the East Boston neighborhoods of Eagle Hill and Harborview on its way northward to Constitution Beach and to the North Shore beyond with aspirations of connecting to Greenway networks and neighborhood linkages in Winthrop, Revere, and Chelsea. The Greenway has several owners and maintainers, including the City of Boston's Parks Department, Massport, and the Department of Conservation and Recreation (DCR). The vision to create a "Winthrop Greenway" extension through an off-road, multi-use path has existed for decades with strong interest from East Boston and Winthrop

residents, the Greenway Council, Bike Winthrop, the Winthrop Transportation Advisory Committee, and Friends of the Belle Isle Marsh. The Friends of the Mary Ellen Welch Greenway (FoMEWG), an organization of residents that serve as the management body and stewards of the Greenway, created a Greenway Extensions Committee in the winter of 2019 including representatives from Bike Winthrop, Friends of Belle Isle Marsh, Greenway Council members, Airport Impact Relief Inc. (AIR INC), and residents to work on supporting the envisioned greenway extensions. In 2020, Kittelson assembled a consultant team and was selected to conduct a Feasibility Study for a greenway extension the Belle Isle Marsh Trails and Boardwalks in Winthrop from the Orient Heights MBTA Blue Line Station. The team was tasked with exploring a preliminary preferred route, as well as other alternatives, with the goal of being able to understand the full breadth of options available and build a strong case for future funding requests and partnerships.

The feasibility study assessed three primary route options and recommend a preferred alignment following evaluations of each route based on community-driven goals. This project included engagement with community groups, residents, and relevant agencies and property owners; outreach included a site walk, two surveys that received over 1,000 responses, project updates at Greenway Council meetings, an on-site event at multiple locations throughout the study area, interviews with agency stakeholders, community and agency/property owner focus groups, and direct outreach to neighborhoods. Existing conditions analysis include data such as right-of-way and private property ownership, environmental review, agency maintenance and operations needs, the presence and condition of pedestrian and bicycle facilities and crossings, utilities and streetscaping, crash history, and vehicle operations. The study synthesizes the issues and opportunities on 21 distinct on-street and off-street segments and then evaluated each segment on a variety of constructibility, operations, and user quality criteria. The project team also provided tangible next steps for the community and partners to maintain momentum on the project, such as permitting guidance and potential funding sources, and provided planning-level cost estimates for each primary route option.



## BRADFORD RAIL TRAIL | HAVERHILL, MA | 2012-2017\* (GPI)

\*Denotes project design completed by GPI's Ron Headrick, RLA, while with another firm.



The Bradford Rail Trail is envisioned as a 3-mile, non-motorized path along a portion of the old B&M Georgetown Branch rail corridor, from Bradford to Main Street in Groveland. The path will ultimately connect the Bradford section of Haverhill via Groveland and Georgetown to the 23-mile Borders to Boston Trail that will run from Salisbury to Peabody. In addition to linking to this regional trail system, the Bradford Rail Trail is an important component of two other initiatives, including the 1-mile Haverhill Riverwalk loop and the regional Merrimack River Trail.

The first 3/4-mile section of the trail initially opened in 2011 along the southern shore of the Merrimack River, between the upper and lower bridges in Haverhill. The path consisted of crushed asphalt with little in the way of benches, street connections, or other

amenities. This section has now been reconstructed to a new standard that includes a 10-foot paved surface, benches, kiosks, granite markers, sculpture installations, and protective fencing along the steep riverbanks. Four separate side-path connections are provided to link in the adjacent neighborhoods and improve connectivity to the river. The project also included installation of lighting, surveillance cameras, and emergency call stations for safety and night use.

GPI's project manager led a design team from 2012-2016 that worked with the City of Haverhill, MassDOT, and the Friends of the Bradford Rail Trail Committee to arrive at a comprehensive design that responded to the site's context and challenges. The project followed our project manager to GPI, who provided construction phase services that included shop submittal reviews, response to contractor inquiries, and attendance at construction meetings. This state-funded project was completed in the summer of 2017. The new trail is named The Mayor James J. Fiorentini Bradford Rail Trail in honor of the project's long-time advocate.

## BRUCE FREEMAN RAIL TRAIL | ACTION, CARLISLE, WESTFORD, AND CONCORD, MA | 2010-2019 (GPI)



The Bruce Freeman Rail Trail is envisioned to extend nearly 25 miles, from Lowell to Framingham, along the former Penn Central railroad line. The trail connects communities with local open space areas, including meadows, woodlands, ponds, historical sites, and shopping areas.

GPI was selected to provide design services for Phases 2A, 2B, and 2C through the communities of Acton, Carlisle, Westford, and Concord. An inter-municipal agreement was signed by the four communities, with the Town of Acton acting as the lead agency. Phase 2A, comprised of 4.9 miles of trail, opened in April 2018. Phase 2C, which is 3 miles long, was completed in the spring of 2019. Phase 2B, a 0.8-mile segment that involves a bridge crossing of Route 2A, is currently under construction.

Phase 2A begins at the end of the first segment in Westford and includes a paved asphalt multi-use trail with 2-foot stabilized shoulders and an adjacent 6-foot stone dust trail. The trail width varies from 10-to-12-feet to respond to environmental conditions. The Phase 2A trail design included the construction of a pedestrian bridge structure over Route 2A/119, the rehabilitation of six existing railroad bridges, a wildlife under-crossing of the rail trail, and enhanced crossings at roadways. Points of interest along this segment of trail include Nashoba Brook conservation land and Ice House Pond in Acton.

Phase 2C includes a paved multi-use trail with 2-foot stabilized shoulders, the construction of a steel truss pedestrian bridge structure over the Assabet River, rehabilitation of the existing railroad bridge over the Nashoba Brook, and a new tunnel under Powder Mill Road. Phase 2C also includes an at-grade crossing of the MBTA rail tracks, which required development of alternatives and close coordination with the MBTA.

The Phase 2B segment will be a 12-foot paved multi-use trail with 2-foot stabilized shoulders, a steel girder bridge over Route 2, a pre-fabricated pedestrian bridge structure over Nashoba Brook, and a wildlife under-crossing of Route 2.

GPI prepared the final design and right-of-way plans, sketch plans and final bridge plans for the bridge structures along the trail, special provisions, and an engineer's estimate meeting the requirements of MassDOT for the construction of the project. GPI also led the required environmental permitting and worked with the Friends of the Bruce Freeman Rail Trail on extensive community participation and coordination with abutters.



## SCOPE OF SERVICES

### APPROACH

Kittelson has prepared a work plan for the Minuteman Bikeway Planning Project that will result in an actionable Implementation Plan by March 2022 in advance of Arlington's annual Town Meeting. Our streamlined nine-month process assumes Notice to Proceed (NTP) in July 2021. If NTP is received later than this, we will work with Town staff to determine an approach that will achieve the goals of the project while still reaching completion before April 2022.

Project success requires early and purposeful coordination with the Department of Planning & Community Development (DPCD) and the Arlington Bicycle Advisory Committee (ABAC) as well as with agency and department stakeholders, including the Tree Committee, Open Space Committee, Parks & Recreation Commission, Community Preservation Act Committee, and Capital Planning Committee. With a swift project timeline, our team will leverage a nimble structure and efficient coordination with appropriate project team members and stakeholders to maximize efficiency throughout the project and, in particular, during the data collection tasks.

We have assembled a team of planners, roadway and civil engineers, and landscape architects to holistically address the existing challenges and opportunities on the Minuteman Bikeway. Our firms have worked successfully together in the past through close collaboration, and our staff will coordinate directly on tasks to avoid the siloing of disciplines. Kittelson and GPI project team members presented in this proposal are currently partnered on the MassTrails *Shared Use Planning and Design Guide* and will bring this teamwork and passion for shared-use path projects to the Minuteman Bikeway.

The scope presented in this proposal reflects our understanding of the highest priority items that can be accommodated within the budget. Our team has also prepared optional additional tasks to reflect the detail expressed in the RFP.

### UNDERSTANDING

The Minuteman Bikeway in Arlington extends for 3.6 miles and interfaces with Arlington neighborhoods and commercial centers at access points and roadway crossings. While many who use the Minutemen Bikeway connect to it from the surrounding neighborhoods in Cambridge, Arlington, Belmont, Lexington, Bedford, and Concord, the entire potential user population approaches as many as 250,000 people. This figure almost doubles when considering the connection from the Minuteman to the Somerville Community Path. The path provides access to some of the region's most vibrant communities as well as important historical areas along the former railroad line. The Bikeway also faces challenges because of its success as an iconic shared-use path in New England: high volumes of commuters, students, dog walkers, and parents and caregivers pushing strollers lead to crowding on the pathway and potential conflicts between users of different modes and traveling at different speeds. The Bikeway, originally constructed in 1993, needs maintenance and

design best practice upgrades to increase safety, comfort, accessibility, and greater continuity of character and wayfinding to aid in supporting a positive experience for all.

Trailheads and road crossings function as arrival points to the path and become landmarks, set first impressions, and provide a context of decision making identifiable for wayfinding and mental cognitive mapping. While **Navigating the Minuteman Bikeway** (NTMB) provides initial descriptions of trailheads and waysides, it focuses on the elements while ignoring functional aspects. Prominent anchor points, such as the Alewife parking garage, serve as significant points of access for the trail. Connections between the town centers or other intermittent locations along the route pose challenges for those seeking to access the trail from the road network or trail users seeking to access the commercial opportunities in Arlington—an imbalance of vehicle and bicycle parking, inconsistent wayfinding, non ADA-compliant features, and challenging roadway crossings can all pose barriers to potential Bikeway users or potential customers for local businesses.

The Implementation Plan should provide the Town with a tangible road map for implementing policy and infrastructure recommendations. Our approach is to prioritize developing recommendations for Bikeway cross section, lighting, and signing that can be applied broadly throughout the corridor. At priority locations that require conceptual engineering and should be developed on a case-by-case basis, we will create conceptual drawings that will inform an initial understanding of opportunities and constraints, cost, and coordination needed so that the Town can seek appropriate funding for the design and implementation of improvements.



*Accessing the Bikeway from Linwood Street.*



**METHODOLOGY****TASK 1: EXISTING CONDITIONS ASSESSMENT**

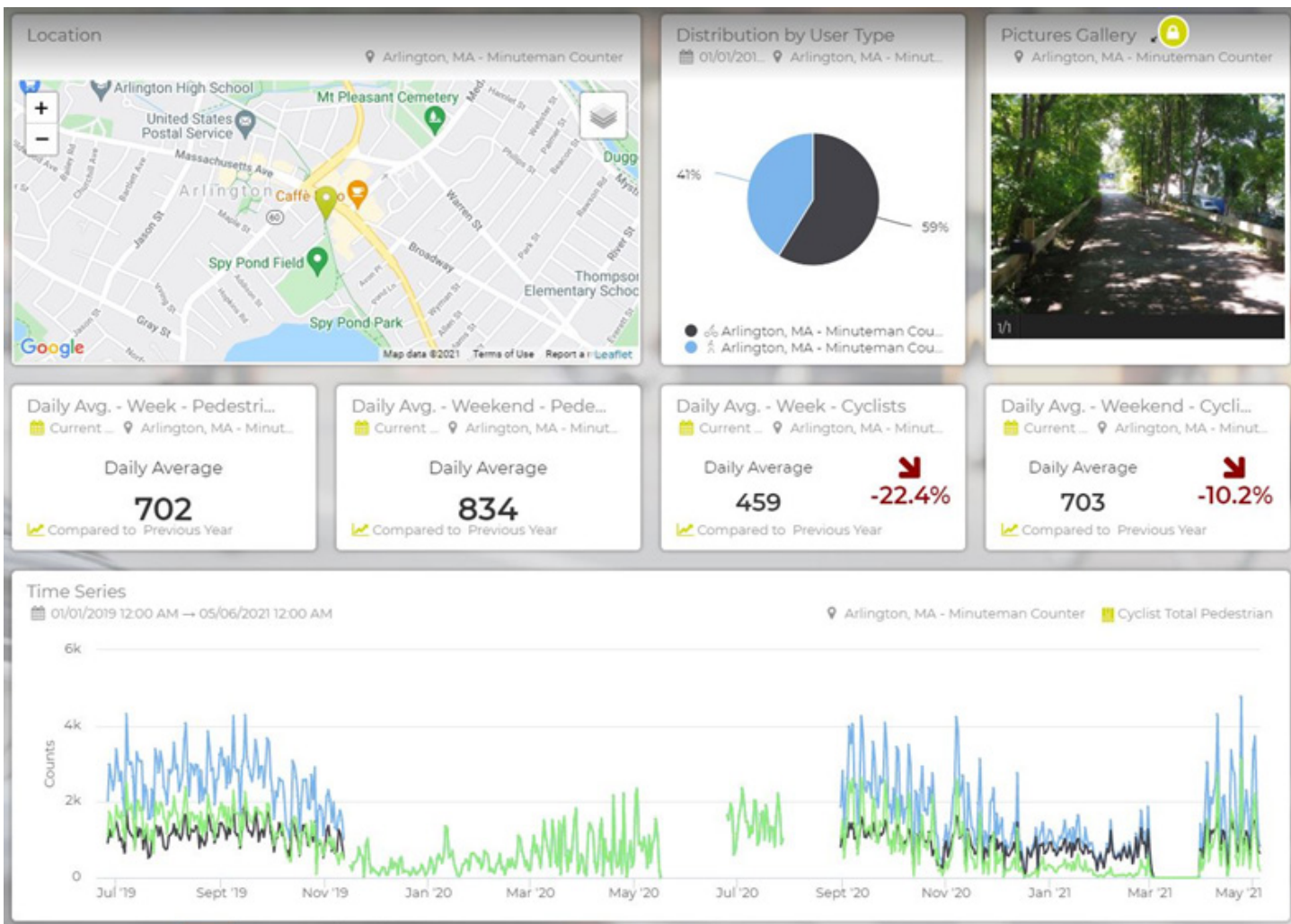
Our team will conduct a comprehensive assessment of existing conditions on the bikeway, keeping the focus on information that will inform an implementation plan that meets the goals and priorities of the project. To maximize efficiency, we have developed the following data collection matrix, which outlines the specific information needs, data collection approach, and the corresponding existing conditions analysis to be conducted. Our team will prepare and use a data collection template to ensure consistency between staff and data elements.

**Table 1: Data Collection Elements**

EXISTING CONDITIONS ELEMENT	DATA COLLECTION METHOD	OUTCOME	OPTIONAL DATA COLLECTION (ADDITIONAL ITEMS NOT INCLUDED WITHIN THIS SCOPE)
Document review of existing plans, processes, policies	Coordinate with project team to compile relevant documents	Summary text of project history, context, and related projects or proposed work, including proposed and planned new connections and engineering plans related to the Bikeway	
Existing maintenance practices	Discussion with relevant Arlington departments	Summary table of current maintenance practices, including challenges and successes	Inventory of maintenance needs along corridor and at access points with photo documentation
Existing entry and access points	Site visit	Summary table of existing access points including characteristics such as sight distance, design practices that impact separation of users or user speed, and ADA compliance	
Bridges	Site visit	Summary table including width of bridge structures and effective width for path users	Bridge condition assessment
Current signage	Site visit	Summary table of current signing practices/applications	Complete sign inventory
Artwork	Site visit	Summary table of current artwork locations and characteristics	
Intersections	Site visit	Summary text or graphic representation of path/roadway crossings, traffic and user volume and operations data as available, and observations of issues and opportunities based on Shared Use Path and Complete Streets best practices	
Drainage	Coordinate with project team to identify key locations with drainage issues, followed by a site visit	Summary text of drainage-related issues and opportunities and key locations. Identification of green infrastructure opportunities	Drainage system condition assessment
Opportunities to add access points	Site visit and parcel ownership review	Annotated map identifying opportunities of additional formal access points, noting any constraints or considerations	
Opportunities to add waysides	Site visit	Summary table of potential waysides locations, potential ROW issues, site characteristics and features, and consideration of abutters	



Opportunities to add temporary and permanent public art installations	Site visit	Summary table of potential temporary and/or permanent art installations.	
Crash history	Coordinate with project team to access local crash narratives or crash data as available along the Bikeway and at road crossings	Identification of hot spots and/or patterns in crash history through maps or infographics	
Path volumes	Review EcoCounter data for pre- and during pandemic conditions	Infographic or summary charts, highlighting mode split as available	



**Kittelson managed the installation of MassDOT's Minuteman EcoCounter station south of Swan Place. We work closely with MassDOT and the Town of Arlington to maintain the physical counter and data dashboard.**

#### DELIVERABLES

- An existing conditions chapter for the Implementation Plan, including text, graphics, maps, and tables to reflect the best format for each data element outlined in Table 1.



## TASK 2: DEVELOP VISION, GOALS, AND PRIORITIES

Drawing on Connect Arlington, Kittelson will prepare a set of goals and priorities based on the Town's previous work and community engagement that have been tailored to this project's scope and desired outcomes. These goals and priorities will be vetted by Town staff, members of the Bicycle Advisory Committee, and the community and will be adjusted if needed. Linking this project to goals and priorities already established through other work and getting buy-in from key stakeholders and the public on the purpose and scope of the project will help build support for the final Implementation Plan. Kittelson followed a similar approach of leveraging existing conditions information and the results of a broad-reaching community survey (see Task 9) to understand community priorities and draft a set of Vision, Goals, and Objectives for the Mary Ellen Welch Greenway Winthrop Extension Feasibility Study.

### DELIVERABLES

- One (1) draft and one (1) final set of Vision, Goals, and Priorities.

## TASK 3: DEVELOP POLICY RECOMMENDATIONS

Working closely with Town staff and the ABAC, Kittelson will document current policies on the Bikeway along with issues and opportunities. Our team will provide up to two (2) case studies from other communities with similar trail or greenway facilities who have developed and implemented successful user policies.

### DELIVERABLES

- Up to two (2) case studies of policies from other shared use paths or trails.
- One (1) draft and one (1) final chapter for the implementation plan documenting current relevant policies and policy recommendations.

## TASK 4: DEVELOP SHORT- AND LONG-TERM MAINTENANCE RECOMMENDATIONS

Similar to Task 3, Kittelson will work with Town staff and the ABAC to understand and document the current maintenance practices and where there are successes or shortcomings. Our team will provide up to two (2) case studies from other communities with similar trail or greenway facilities who have developed and implemented successful maintenance practices.

### DELIVERABLES

- Up to two (2) case studies of maintenance practices from other shared use paths or trails.
- One (1) draft and one (1) final chapter for the implementation plan documenting current maintenance practices and non-site specific short- and long-term maintenance recommendations.



*A placemaking element has become a maintenance challenge and hazard for path users.*

**Optional Additional Work Tasks (not included within this scope):** The Bikeway needs comprehensive maintenance throughout its length. Documenting and providing recommendations for all existing maintenance needs is not feasible within the scope of the project. As an optional additional task, our team will incorporate additional data collection related to pavement condition, overgrown vegetation, curb ramps, signs, or other maintenance needs and develop a phased implementation schedule alongside Town staff.

## TASK 5: DEVELOPMENT OF CORRIDOR-WIDE RECOMMENDATIONS

The Bikeway accommodates high volumes of multimodal users every day. Even with the ongoing pandemic and a reduction in commuter traffic, the Bikeway remains an essential recreational facility. High volumes of users with different needs and sometimes incompatible behaviors (e.g., a high-speed cyclist riding past a startled dog or a distracted toddler) can lead to safety risks and decrease user comfort. The work items outlined in this task focus on addressing safety and comfort along the length of the Bikeway corridor.

### OPPORTUNITIES TO WIDEN THE BIKEWAY

First, we will consider widening the Bikeway. The MBTA right-of-way in which the Bikeway is situated is typically more than 40 feet wide; considerations for the feasibility of widening the Bikeway will likely be more related to topology, environmental factors, and identifying locations with potential abutter impacts. Our approach will be to identify the key constraints and opportunities along the corridor to jump start a future design process.



*Topography along the Bikeway will present challenges to widening the corridor.*



## OPPORTUNITIES FOR LIGHTING AND ILLUMINATION

We understand from the RFP that the Town wishes to consider lighting the pathway to enhance safety, comfort, and attractiveness. Our observation of mapping and review of the path indicates that there is little comprehensive lighting along the trail, but there is “borrowed lighting” on the path from adjacent land uses (e.g. streetlighting, lighting from adjacent parking lots, town parks and recreation areas, etc.). Bringing lighting to the path has enormous opportunities, but it also brings significant cost considerations. We offer our experience and information so that the Town can proceed with a thoughtful process in compliance with Town policies and set the stage for phased lighting improvements that coordinate with proposed improvements, such as trail widening. We have experience bringing lighting to sensitive areas where issues of security, safety, and comfort were balanced by abutter concerns, natural settings, and other sensitivities. These include pathway projects as well as recreation and transportation projects for which lighting is an important consideration for safety and aesthetics. We have experience with a variety of lighting types and are well versed in issues that communities often raise about lighting.

For the purposes of this project, we consider “illumination” to be the creation of a lit condition so that a person riding a bicycle or walking can see the environment in front of them and recognize that there are people coming from the opposite direction. Accomplishing illumination is different than providing lighting as ambiance and site furniture, like one might use with more formal lighting on a main street.

To develop our recommendations, we will need to understand current Town policies regarding lighting, which may range from sensitivity to dark sky and environmental considerations, public safety and crime prevention, and the current policies and regulations in the Town's development standards. We will also employ national standards of the Illumination Engineering Society of North America (IESNA) and dark sky guidance documents to develop a functional design approach. We will consider an approach for phased implementation of an overarching lighting strategy to accommodate the significant cost that lighting infrastructure poses. This may include consideration of where lighting power sources could be accessed at street crossings or where conduit installation for future use could be coordinated with a Bikeway widening effort for associated cost savings.

**Illumination** is typically accomplished with taller poles at greater spacing with defined photometrics in the context of a pathway for a long and narrow lighting distribution pattern so that it can be achieved with certain LED fixtures specially adjusted.

**Lighting** is about the decoration of space using the fixtures and the lighting style to have a specific design character (e.g. historic, period, modern, etc.) of which the light fixture is an integral part of the design concept. For this, we would select decorative fixtures to accomplish a defining style.

## OPPORTUNITIES TO UPGRADE SIGNING

Shared-use path signing can achieve a few primary goals:

- Provide traffic control or warn users of upcoming conditions or conflicts, such as stop signs at crossings or Curve Ahead signs.
- Regulate behavior based on path policy, such as listing hours of operation.
- Contribute to a sense of place by providing context, orientation, and direction as wayfinding.

We will draw on the existing conditions review to understand what types of signs are on-site and their typical applications. Through coordination with Town staff, we will consider which applications are appropriate, which should be updated, and where new sign types should be incorporated. For instance, one recommendation could be to provide wayfinding signs at access points, which are sometimes subtle and easy to miss. This should be balanced with minimizing overall sign clutter and maintaining the character of the path. Signs should be considered on adjacent streets to help users access the Bikeway. This task will draw on policy recommendation outcomes from Task 3.

**Optional Additional Work Tasks (not included within this scope):** Documenting all existing signs and providing comprehensive site-specific recommendations is not feasible within the scope of the project. As an optional additional task, our team will develop a signing plan for the corridor.



*The end of Varnum Street has no wayfinding indication of the Bikeway. Varnum Street serves as a primary connection to the Bikeway south of Lake Street and is close to the East Arlington shops/restaurants on Massachusetts Avenue.*





**Existing signs meant to regulate behavior and promote Bikeway etiquette.**

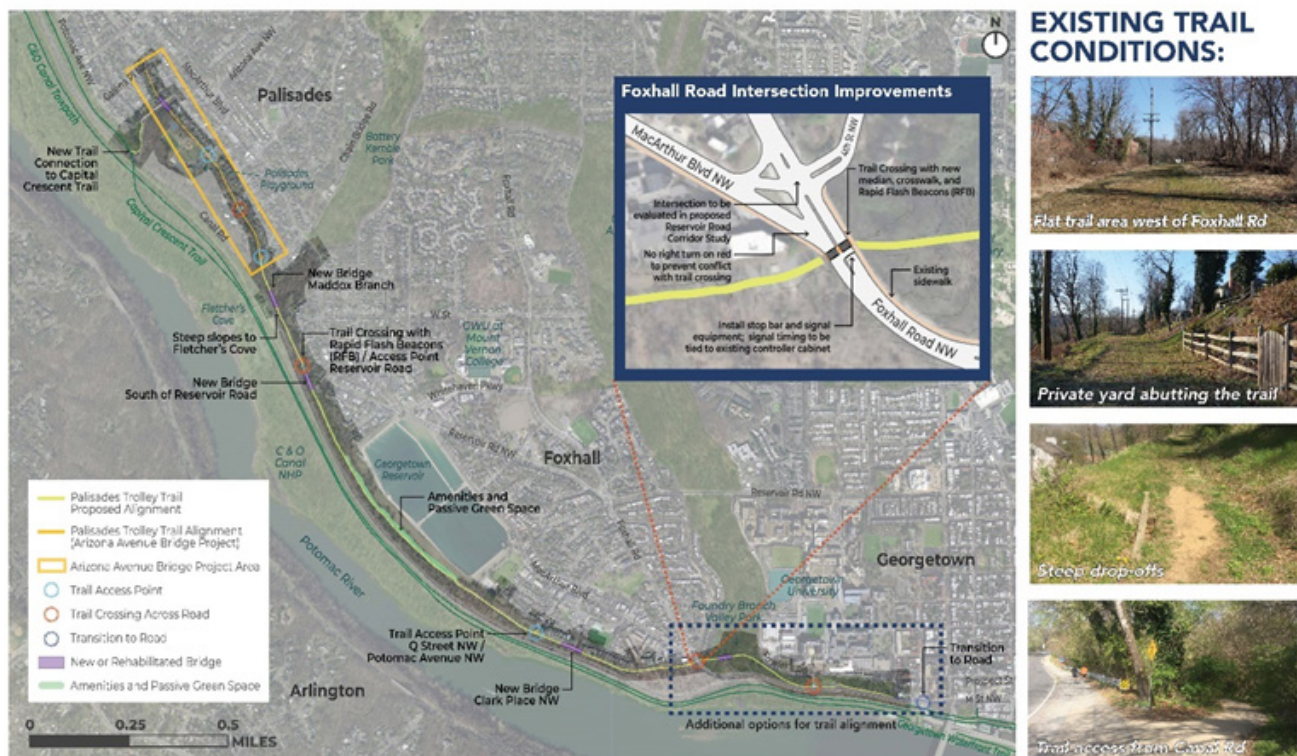
In summary, drawing on the existing conditions assessment completed in Task 1, we will develop corridor-wide recommendations around the following opportunities:

- The need and potential for widening the Bikeway, taking into account available right-of-way, encroachment, environmental factors, topography, and Shared Use Path Level of Service (SUPLOS) using the FHWA's 2006 SUPLOS calculator.

- General recommendations for updating lighting, establishing a lighting typology with order of magnitude cost, recommended spacing and application, and best practices for reducing light pollution. High-level recommendations for lighting locations will be provided, taking into account existing lighting assets, roadway crossings, and access points.
- Recommendations for signing along the corridor, including those that are required or meet best practices for safety and awareness and those that are primarily for wayfinding. These recommendations will draw on those included in Navigating the Minuteman Bikeway Plan and update as appropriate to reflect best practices. These recommendations will include unit costs for each type of sign. Revised signing standards should be of higher quality than traditional traffic signs but should also consider ways that it can be easily maintained, relatively inexpensively replaced if damaged, and graphically interesting and compelling.

Each of these exercises will result in an annotated map or set of maps highlighting issues and opportunities along the corridor. The lighting recommendations task will also include a summary document outlining lighting recommendations that can be applied throughout the corridor and order of magnitude costs for installation.

## POTENTIAL TRAIL ALIGNMENT



PALISADES TROLLEY TRAIL AND FOUNDRY TRESTLE FEASIBILITY STUDY  
Project Website: <https://ddot.dc.gov/page/palisades-trolley-trail>

d. DISTRICT OF COLUMBIA  
MURIEL BOWSER, MAYOR

**Kittelson led a study for the Washington, DC, District Department of Transportation (DDOT) to determine the feasibility of a shared-use path between downtown Georgetown and the Palisades and Foxhall neighborhoods to provide connections to the existing Capital Crescent Trail. The study included concept design for trail crossings, intersections, and access points.**

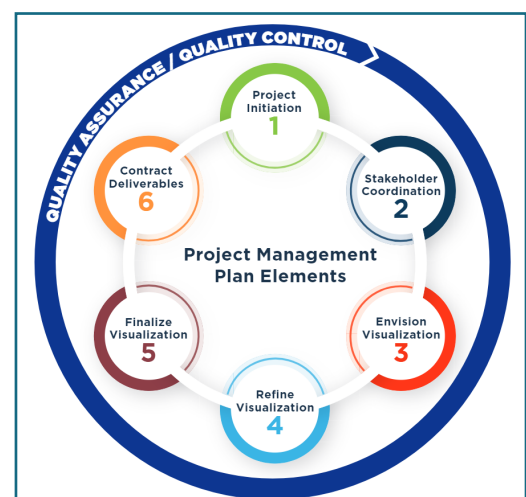




*Kittelson also led the planning and concept design of a mile-long bicycle and pedestrian boulevard and off-street trail through downtown Lancaster, Pennsylvania, along the Water Street corridor. The project included recommendations for trail crossings, two trailheads, and opportunities for waysides.*

#### DELIVERABLES

- One (1) map and text summarizing issues, opportunities, and next steps related to widening the Bikeway.
- Up to two (2) scenario maps illustrating a proposed lighting strategy along the corridor and order of magnitude cost estimates.
- Summary table, graphics, and/or text with functional design recommendations for lighting
- Summary table, graphics, and/or text with design recommendations for signing.
- One (1) draft and one (1) final chapter for the implementation plan documenting the corridor-wide issues, opportunities, and recommendations outlined in Task 5.



*All Kittelson deliverables will go through a rigorous QA/QC process before submittal to the Town.*

## TASK 6: DEVELOPMENT OF ROAD CROSSINGS AND ENTRY POINT RECOMMENDATIONS

Road crossings and entry points are the locations where path users are most likely to come into conflict with vehicular users and each other. Perceptions of unsafe conditions can be a barrier to access or can color a person's experience and memory of the Minuteman Bikeway. Sight distance at crossings, exposure to conflicting vehicle traffic, and overcrowding of designated path user space can diminish safety for Minuteman users. Drawing on the findings from the existing conditions data and site observations completed during Task 1, survey results, and input from Town staff and the ABAC, we will review and develop specific concept-level recommendations at the following locations along the Bikeway:

**Table 2: Recommendation Locations**

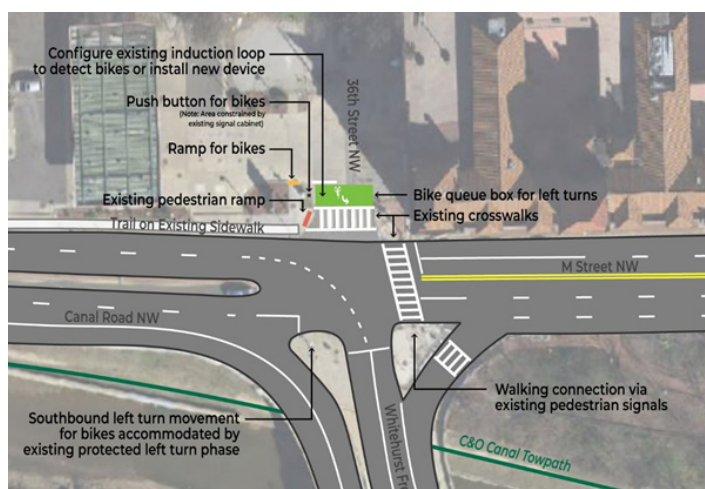
<b>At-grade, unsignalized road crossings</b>	<ul style="list-style-type: none"> <li>• Water Street</li> <li>• Linwood Avenue</li> </ul>
<b>At-grade, signalized road crossings</b>	<ul style="list-style-type: none"> <li>• Mill Street</li> <li>• Massachusetts Avenue/Mystic Street/Pleasant Street</li> <li>• Lake Street</li> </ul>
<b>Access points/entry points</b>	<ul style="list-style-type: none"> <li>• Up to three (3) specific locations to be determined with the project team based on existing conditions assessment and public input.</li> </ul>

## DELIVERABLES

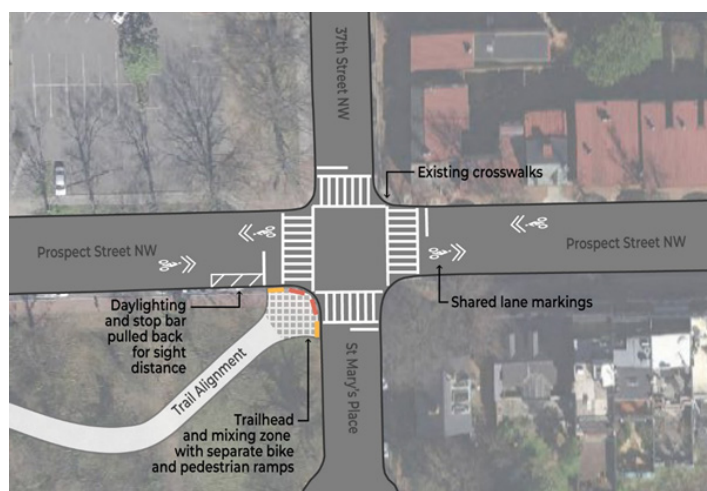
- Conceptual design for planning purposes at up to eight (8) locations with order of magnitude cost estimates.



*Kittelson developed a trail crossing concept for the Palisades Trolley Trail in Washington, DC, that featured a scalloped stone seating wall, bluestone granite pavers, an extended median nose to protect the crossing, and a marked crossing enhanced with an RRFB.*



*Palisades Trolley Trail entry point concept for an alternative ending the busy commercial corridor of M Street NW in Washington, DC.*



*Palisades Trail entry point concept for an alternative that terminates on a quieter, residential street in DC (Prospect Street).*

*For MassDOT's Shared Use Path Planning and Design Guide, Kittelson led the development of intersections and crossings guidance. We adapted NCHRP Report 562: Improving Pedestrian Safety At Unsignalized Crossings (2006) to create a process for selecting crossing treatments, including signs and pavement markings, RRFBs, PHBs, and signals based on a path user delay metric.*





*A path user carefully navigates entry between a bollard and stones at the Thorndike St. access point.*



*This task will include a safety review of the 2020 infrastructure updates at Lake Street.*



## TASK 7: DEVELOPMENT OF TRAILHEAD AND WAYSIDE RECOMMENDATIONS





Trailheads are the “lighthouses” that guide and welcome visitors to the facility. Trailheads are important visual and physical portals that should be located at specific places where people coming to the bikeway can park, become oriented to the path, and meet with family and friends. They should create a gathering place for people to socialize, rest, and connect with community. The Bikeway has also become a significant economic driver to the service centers along its route in the town and village centers where people can access services, food, and refreshment.

### Economy

Shared use paths can contribute significant economic benefits to their communities by providing access to businesses within walking and biking distance, and by creating an attraction for visitors



### Benefits to study trail communities (July-October 2019)

				
	Minuteman	Northern Strand	MCRT-Norwottuck	Cape Cod
OBS CREATED OR SUSTAINED	26	4	20	99
TOTAL ECONOMIC IMPACT	\$2.6M	\$367K	\$1.7M	\$9.2M
TOTAL TAXES GENERATED	\$361K	\$36K	\$250K	\$1.5M

Numbers based on surveys from one city along each trail.

*Studies of shared-use paths, including the MassTrails Shared Use Path Benefits Study led by Kittelson, have validated the level of economic value that is brought to their host communities.*

Trailheads typically require the following facilities:

- Access to convenient vehicular parking in adequate quantity to support the level of use.
- Informational kiosks and maps.
- Bike racks.
- Tables with seating.
- Restrooms.
- Catch-up areas (i.e. pull off areas to wait for companions).
- Art installations.
- Lighting and other amenities .
- Access to major generators and/or destinations (parks, playgrounds, rinks, schools, restaurants, public buildings, etc.)

Different types of trailheads should be distributed relatively evenly to create predictable locations for the amenities that users desire. Many trailheads also have significant street crossings where pedestrians, bicycles, and vehicles come together with safety and aesthetic needs. We want to be sure that there are opportunities to link the Bikeway with the surrounding community, including other modes of transportation and connector trails, to areas outside of the Minuteman corridor.





***Accessible parking at the Thorndike Parking Lot trailhead.***

Waysides, which are similar in many respects to trailheads, will typically have a smaller footprint and fewer amenities. These casual stopping points focus more on providing users with regular points of respite, contributing to the character and cohesive feel of the Bikeway through things like art installations, highlighting locations of interests (including scenic views or historic landmarks), and orienting users. Our approach considers both trailheads and waysides. Waysides should range in the intensity of amenities offered. For the purposes of this plan and based upon **Navigating the Minuteman Bikeway**, three levels of accommodation are considered:

- Level 1 waysides provide small-scale, modest amenities for rest and information. They can be located both as part of an intersection design as well as freestanding in a mid-block location.
- Level 2 waysides include seating, small-scale gathering spaces, kiosks, and bicycle parking racks. There can also be public art and children's play features.
- Level 3 waysides include additional amenities, such as restrooms with drinking fountains, more varied/larger areas of seating (including tables) and other amenities.



***A Bluebikes station at the intersection of the Bikeway and Magnolia Park.***

No matter the scale, lighting should be considered to illuminate the space for safety and comfort purposes. Waysides at all scales have the opportunity for interpretive installations to complement standard seating design and signage to make them special. This could include special landscapes and garden areas that also function as green infrastructure that treats storm water. The public art component of installation at waysides can have multiple themes based upon creative placemaking, artistic themes, and historic interpretation.

While there are practical and programmatic components to trailheads and waysides, there is also a creative component. Each trailhead becomes, in essence, a pocket park or visitor center to welcome people to the Bikeway. The aesthetics of the place become extremely important so that people feel comfortable and welcomed and so that you begin to tell the story of the community, the history of the environment and other meaningful narratives. Recent research in amenities for bicycle paths has identified the single most important thing for a bicycle path to offer as an amenity for its travelers and people resting along the way is shade trees. While much of the corridor has remnant trees along the lines of the border of the railroad bed, a longer-term shade tree strategy could be developed.



***Wayside station with interpretive panel and seating at a wayside on the Bruce Freeman Rail Trail in Concord, MA (left), and community gathering space and overlook with sculpture along the Bradford Rail Trail in Haverhill, MA (right).***

Recognizing the nuance between these two types of focal points along the Minuteman, our team will begin by identifying opportunities for both character types and then will provide recommendations based on what level of amenity is appropriate. GPI will lead this task, drawing on years of trail and greenway design and placemaking experience. Our team will:

- Identify the programmatic locations for trailheads and waysides and develop a map of all of these locations so that there can be a representative strategy for the application of amenities at various points through the Town of Arlington. Waysides will be integrated with street crossings as well as other locations with programmatic influence and identified based on appropriate scale.
- Meet with town staff for discussion about the programmatic design and maintenance considerations for trailheads and waysides and identify responsible parties and partnership opportunities with adjacent land uses.
- Meet with Arlington Art Council, Arlington Historical Society, and other parties to brainstorm opportunities for historical, artistic, cultural, and natural considerations and themes for development of meaningful interpretation.

For trailheads, we will:

- Consider ways that there can be partnerships for parking to serve the Bikeway as well as other uses in complementary ways.
- Look for neighboring land uses that could help with programmatic requirements, such as public bathrooms associated with cafes and other services that might be provided.
- Look at ways to design a welcoming streetscape for the entrance and the view of the trailhead, considering issues like accessibility for users with disabilities, conflict-free routing of bicycles and pedestrian traffic, and creative placemaking opportunities.
- Integrate graphic recommendations for design standards of the bikeway from **Navigating the Minuteman Bikeway**, seeking to dig deeper into the meaningful components of the facility design beyond the basic unit-level decisions of which park bench to procure or what signage should look like.

For waysides, we will:

- Consider aspects of road crossings with potential to be integrated with streetscaping and make Bikeway crossings a more identifiable feature.
- Consider common design themes for seating, lighting, safety, and wayfinding signage compatible with Bikeway standards.
- Consider ways to integrate landscaping with functional landscape requirements, with specific attention to green infrastructure for storm water.

- Consider whether additional landscaping may be necessary for screening abutters in areas where the Bikeway may be widened (identified in Task 5).
- Consider interesting ways to design features along the railroad bed corridor either to historically interpret the rail bed as a heritage feature or to use it as an artistic departure.
- Ensure that all features are proposed with compelling aesthetics, ease of maintenance, and manageable cost at the forefront.
- Develop a series of design vignettes for different characters of waysides built upon the foundation of the historic railroad, the historic neighborhoods, natural characteristics, and cultural influences; develop artistic expressions, concept sketches, and order of magnitude cost estimates in support of different types of trailheads and waysides. These will be developed at the following locations:
  - Ed Burns Arena.
  - Hurd Field and the Trader Joe's grocery store.
  - 0 Brooks Avenue at Brooks Avenue and Varnum Street.
  - 21 Pond Lane abutting the east side of the Bikeway and Pond Lane.
  - Orvis Circle at the end of Orvis Road abutting the Bikeway.

## DELIVERABLES

- Up to five (5) design vignettes including conceptual sketches and order of magnitude cost estimates.
- A set of generalized placemaking recommendations that can be applied throughout the corridor to existing and future scenarios.

## TASK 8: DEVELOP IMPLEMENTATION PLAN

Kittelson will develop an implementation plan that includes next steps and strategies for implementing the various recommendations detailed in the project with a proposed timeline, potential funding sources, and identification of who should be responsible for each item or whose coordination is critical to moving forward.

## DELIVERABLES

- One (1) draft and one (1) final Implementation Plan.

## TASK 9: MEETINGS AND OUTREACH PROJECT TEAM MEETINGS

The success of this project will rely on close collaboration between the consultant team, Town staff, and ABAC members. Our team will attend up to four (4) in-person or virtual project team meetings. It is anticipated that these meetings will include a kickoff meeting and one meeting to serve as a working session with Town staff to document and discuss Bikeway Policy and short- and long-term maintenance practices and recommendations, as outlined in Tasks 3 and 4.



## MEETINGS AND OUTREACH

Public meetings can be an effective means for communicating a lot of information and collecting feedback, but they do not work for everyone—especially people with limited English proficiency, a lack of transportation options, child-care needs, special needs, or work schedules that do not align with the typical evening meeting. The RFP's Scope of Services indicates that three community meetings or forums should be held, the first to share existing conditions gathered in Task 1 and to gather information about user experience, usage, and priorities. We propose kicking off the community outreach process prior to conducting the existing conditions review with a survey conducted online and as an intercept survey along the Bikeway to garner community input on what works well or needs improvements. This initial outreach effort will:

- Widen the tent of who can provide public input to the project team and allow the project team to learn about users' experiences, usage, and priorities for the Bikeway.
- Allow the project team to vet the proposed data needs before conducting field visits, adjusting as needed.
- Allow the project team to connect with a wide range of residents and commuters who may be invested in the project's outcomes and wish to participate in the upcoming public meetings.
- Inform the drafting of a set of Goals and Priorities that will be presented at a later outreach event.

Kittelson has experience developing and distributing concise, effective surveys. We will develop survey materials and will coordinate with Town staff to conduct the intercept survey. It is assumed that the Town will distribute the online version of the survey to the Town website, Public Library website, and Town Facebook page. Our team will synthesize the results of the survey to be included in the existing conditions chapter of the Implementation Plan.

In addition, Kittelson will prepare materials for and assist Town staff in facilitating up to three (3) public meetings to be held in-person or virtually, as determined by public safety best practices and Town policy in advance of the meeting. Kittelson will prepare maps, graphics, and presentations, as required, for these meetings. All proposed meeting facilitation strategies can be conducted in-person or virtually. It is assumed that the Town will facilitate the translation of materials, as needed, as well as the distribution of all meeting advertisements and notifications.

- **Public Meeting #1:** At the conclusion of Task 1, the project team will facilitate a public meeting to inform the public of the scope and need of the project to establish a set of shared expectations for the outcome of the process and share existing conditions analysis. The first meeting will provide an opportunity to gather more specific information about users' experiences, usage, and priorities in a break-out group format, building on the information received from the kickoff survey.
- **Public Meeting #2:** The second public meetings will happen concurrently with Task 2 and will present the results of all public input received, trends and patterns,

and a draft vision, goals, and priorities that build on public input and existing conditions and align with Connect Arlington.

- **Public meet #3:** The third public meeting will happen concurrently with Task 8 and will present a brief review of the project work to-date, corridor-wide recommendations, and site-specific recommendations at crossings, entry points, and waysides.

## DELIVERABLES

- Materials for and attendance at up to four (4) project team meetings with Town staff and ABAC members as appropriate.
- One (1) survey to be distributed online and as an intercept survey along the Bikeway.
- Materials for and attendance at three (3) public meetings.
- Summary chapter for inclusion in Implementation Plan of engagement efforts conducted and synthesis of public input received.



***Path users on the Norwottuck Rail Trail pause to fill out an intercept survey conducted by Kittelson as part of the recent MassTrails Shared Use Path Benefits Study.***

## SCHEDULE

WORK TASK	
PROJECT TEAM MEETING	
SURVEY	

PUBLIC MEETING	
IMPLEMENTATION PLAN DELIVERABLE	

TASK	2021						2022		
	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR
TASK 1: EVALUATE EXISTING CONDITIONS									
TASK 2: VISION, GOALS, AND PRIORITIES									
TASK 3: POLICY RECS									
TASK 4: SHORT-/LONG-TERM MAINTENANCE RECS									
TASK 5: CORRIDOR-WIDE RECS									
TASK 6: ROAD CROSSING AND ACCESS POINT RECS									
TASK 7: TRAILHEAD AND WAYSIDE RECS									
TASK 8: IMPLEMENTATION PLAN									
TASK 9: MEETINGS AND OUTREACH									

## ORGANIZATIONAL CHART

### TOWN OF ARLINGTON DPCD

#### PROJECT MANAGER

Elizabeth Flanagan, AICP (K)

#### PROJECT PRINCIPAL

Conor Semler (K)

#### QUALITY MANAGER/TECHNICAL REVIEWER

Hermanus Steyn, PE (K)

Radu Nan, PE (K)

#### TRANSPORTATION PLANNING

Elizabeth Flanagan, AICP (K)

Margaret Kent (K)

Megan Morrow (K)

#### TRANSPORTATION ENGINEERING

Radu Nan, PE (K)

Michael Shustack, PE (G)

Jackson Lynch (K)

Bridger Helm (K)

Nichole Rogers, PE (G)

#### LANDSCAPE ARCHITECTURE

Ronald Headrick, RLA (G)

Sage Winter, ASLA, PLA (G)

#### PUBLIC ENGAGEMENT

Elizabeth Flanagan, AICP (K)

Margaret Kent (K)

Megan Morrow (K)

Jackson Lynch (K)

## RESUMES

Resumes for each member of the Kittelson & GPI team begin on the next page.





## ELIZABETH FLANAGAN, AICP | PLANNER



Elizabeth graduated with a master's degree in urban planning from McGill University, where her research focused on mapping environmental justice considerations, such as the relationships between active transportation infrastructure investment and indicators of gentrification. After returning to Boston from Montreal, Elizabeth transitioned into transportation consulting, first as a public engagement specialist and then as a planner. In this position, she has developed a strong background in working with communities to implement complete streets principles, bike and pedestrian safety analysis, and bicycle and pedestrian level of comfort, quick-build design, and trails planning and conceptual design. Elizabeth is an Arlington resident who uses the Minuteman Bikeway as part of her commute – she is excited to see this project improve safety and comfort on this critical neighborhood asset. **Elizabeth has 35% availability for this project.**

## EDUCATION

- MS, Urban Planning, McGill University
- BS, Environmental Studies, Wellesley College

## YEARS OF EXPERIENCE

5

## LICENSES/CERTIFICATIONS

American Institute of Certified Planners (#31501)

## PROJECT EXPERIENCE

**MassDOT Shared Use Path Planning and Design Guide (2017-Ongoing).** Elizabeth is on the team developing the MassDOT Shared Use Path Planning and Design Guide. Her role has included coordinating closely with the client and project team across firms. Elizabeth is also involved in the development of planning and design guidance.

**Winthrop Greenway Feasibility Study (2020-2021).** Kittelson recently completed a feasibility study in East Boston and Winthrop, Massachusetts, which recommend a preferred route alignment for the extension of the Mary Ellen Welch Greenway from Constitution Beach in East Boston to Orient Heights MBTA Station and into Winthrop. The Greenway Extension will provide a critical multi-modal connection between these two communities which are currently separated by the Belle Isle Inlet and can only be accessed along a busy arterial.

This project includes engagement with community groups, residents, and relevant agencies and property owners; this outreach has included a site walk, a survey that reached over 500 people, project updates at Greenway Council meetings, an on-site event at multiple locations throughout the study area, interviews with agency stakeholders, community and agency/property owner focus groups, and direct outreach to neighborhoods. Elizabeth was responsible for coordinating with the client and subconsultant team to develop feasibility study materials and facilitate engagement events.

**Gilbert Transportation Master Plan (2020-Ongoing).** The Town of Gilbert, AZ is in the process of developing a Transportation Master Plan. Kittelson is leading this effort and Elizabeth is on the team focused specifically on the Trails component of the Master Plan. Gilbert has an existing system of formal and informal trail connections, primarily using canal and utility corridors. Elizabeth assisted in the developed of the existing conditions assessment and is currently working with the trails team to develop trail and trail crossing typologies that will inform safety and amenities upgrades to the system.

**Solomon Foundation On-Call (2020-Ongoing).** Working with public and private partners, the Solomon Foundation identifies projects that will significantly improve Greater Boston's major public parks and greenways. Through this On-Call, Kittelson provides preliminary services for greenway and trail planning and design. Elizabeth has been involved as a planner on tasks related to assessing shared use path planning level alignment alternatives and feasibility.

**MassDOT Complete Streets On-Call; Statewide, MA (2017-Ongoing).** Drawing on her background as a public involvement specialist, Elizabeth was part of a small team that developed and facilitated MassDOT trainings that will help municipalities understand and develop effective public engagement plans. The trainings, which are conducted in the context of the MassDOT Complete Streets Funding Program, outline a comprehensive engagement framework that pays special attention to past failures of traditional engagement, best practices for identifying and working with stakeholders early and often, developing a public outreach plan, and employing specific strategies and tools for hosting non-traditional events, widening the tent, and facilitation. The trainings themselves will include interactive sessions that serve the dual function of illustrating non-traditional event formats.

## CONOR SEMLER | ASSOCIATE PLANNER



Conor Semler draws on his experience in urban planning, traffic engineering, and technical research in complete streets design and is highly regarded for his ability to leverage transportation design to create livable and healthy communities. His focus is on improving conditions for walking and bicycling through better evaluation and design. Conor is a national leader in the planning and design of innovative bicycle facilities and was involved in the development of both the NACTO *Urban Bikeway Design Guide* and the FHWA *Separated Bike Lane Planning and Design Guide*. Conor's experience is informed by his roles in leading research, contributing to designs, and working closely with cities to continually evolve and innovate safer, more inviting bicycle facilities. **Conor has 30% availability for this project.**

### PROJECT EXPERIENCE

**Lynn Bicycle and Pedestrian Network Plan; Lynn, MA (2018-2019).** Kittelson led the Bicycle and Pedestrian Network Plan for the City of Lynn as part of the Northern Strand Community Trail. The project included a feasibility of a pedestrian path and possible bicycle trail that connects the West Lynn neighborhoods with the Saugus River, the Lynn Common, downtown, and the Lynn Shore. Conor served as the principal in charge for the study and worked closely with the project team to ensure it met the goals of the community.

**MassDOT Shared-Use Path Design Guide; Statewide, MA (2017-Ongoing).** As a member of a team, Kittelson is leading the planning elements of the *Shared Use Path Planning and Design Guide* that will inform the planning, design, and construction of shared use paths in Massachusetts. Conor worked closely with the research team to develop a framework for the *Guide* and provided strategic direction on the content. His experience with planning and designing for walking and bicycling gives insight to the development of the chapters and content.

**Boston Green Links Plan; Boston, MA (2014-2017).** Kittelson worked on the Boston Green Links Plan, an initiative of the Boston Transportation Department, to identify the best potential ped/bike connections between neighborhoods and parks to serve families and individuals with a wide range of abilities. Kittelson also worked with the City to design one of the proposed green links: a two-way separated bike lane facility. Conor led efforts to identify the best connections between neighborhoods and parks with an emphasis on serving a range of abilities. He helped identify candidate links with low traffic speed and volume or with excessive width from which protected facilities could best be established. He also identified crossing barriers, like inhospitable intersections or rail and river crossings. Through Conor's and the team's efforts towards solving these challenges at spot locations, the Boston Green Links Plan unlocks the larger park network for Boston's residents.

**FHWA Safe and Connected Ped/Bike Networks; Washington, DC (2014-2015).** Kittelson conducted research for the Federal Highway Administration's (FHWA) Global Benchmarking Program initiative to identify existing international research and experience with effective practices and technologies that could improve the US transportation system. Conor worked with the team to gather the latest and best activities, expertise, and accomplishments in cities and countries with the most advancements in delivering safe and connected ped/bike networks. The desktop review of best practices included Japan, Canada, selected European countries, Australia, and New Zealand. Conor and the Kittelson team performed a literature review and practitioner interviews to produce a report titled *Delivering Safe and Connected Pedestrian and Bicycle Networks: A Review of International Practices*, which summarizes the most promising foreign practices and innovations for possible application in the US.

**Winthrop Greenway Feasibility Study; Winthrop, MA (2020-2021).** Kittelson led a feasibility study in East Boston and Winthrop, Massachusetts, which recommended a preferred route alignment for the extension of the Mary Ellen Welch Greenway from Constitution Beach in East Boston to Orient Heights MBTA Station and into Winthrop. The Greenway Extension will provide a critical multimodal connection between these two communities which are currently separated by the Belle Isle Inlet and can only be accessed along a busy arterial. Conor served as the project principal and guided the project team in its analysis and recommendations.

### EDUCATION

- MA, City and Regional Planning, Cornell University
- BA, Government, Colby College

### YEARS OF EXPERIENCE

14

### AFFILIATIONS

- Association of Pedestrian and Bicycle Professionals (APBP), Board Member
- American Planning Association, Member
- Young Professionals in Transportation (Former Vice Chair)



# HERMANUS STEYN, PE | SENIOR PRINCIPAL ENGINEER



Hermanus has experience taking transportation concepts he has researched into the planning, design, and construction phases. He is actively involved with organizations dedicated to transportation emerging trends and technologies, like serving as co-chair of the Transportation Research Board Performance Effects of Geometric Design Committee. This committee is refining the future of multimodal transportation design by developing research need statements to address design shortcomings in the industry. He has managed hundreds of projects and knows that the context of the project and working with the community are essential to a successful project. Hermanus understands the interaction between design, operations, and safety for all users, and capably synchronizes all facets of a project to achieve regulatory compliance and facilitate construction. **Hermanus has 20% availability for this project.**

## EDUCATION

BEng, Civil Engineering,  
University of Stellenbosch,  
1991

## YEARS OF EXPERIENCE

28

## LICENSES/CERTIFICATIONS

Professional Engineer, CA, ID,  
MT, OR, TN, UT, WA, and South  
Africa

## AFFILIATIONS

- Transportation Research Board - Performance Effects of Geometric Design Committee – Co Chair
- Institute of Transportation Engineers, Member
- Women's Transportation Seminar, Member

## PROJECT EXPERIENCE

**Rock Creek Trail–Cornell Rd. Mid-Block Crossing; Hillsboro, OR (2011-2016).** Kittelson completed the master plan, design, and construction PS&E; obtained all relevant jurisdictional permits; prepared a construction bid package; and provided construction observation oversight for the Rock Creek Trail–Cornell Rd. mid-block crossing. Hermanus served as the project manager and engineer-of-record for this north-south, off-street regional trail that provides recreational and alternative transportation opportunities for bicyclists and pedestrians through Washington County.

**Metro (Portland OR) Designing Livable Streets and Trails; Portland, OR (2017-2019).** Hermanus guided efforts to update Metro's Street design guides to reflect current best practices and provide guidance on a performance-based design approach for regional streets and trails. The new *Designing Livable Streets and Trails Guide* provides the linkage between the Greater Portland region's policies and vision for implementing streets based on land uses by defining project outcomes, the functions of the streets to support the communities and the intended outcomes, establishing design principles and elements to support the functions, and providing a performance-based design decision-making framework that gives practitioners the flexibility to develop community-based solutions.

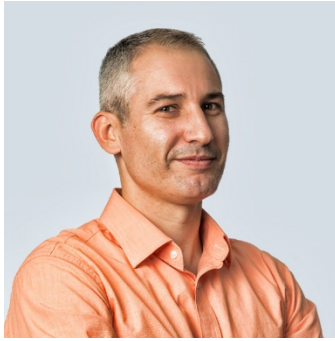
**Alameda Central Ave. Complete Streets Plan; Alameda, CA (2014-2016).** Hermanus worked with a multidisciplinary team to evaluate and develop concept plans for implementing a road diet along Central Ave. The project included bicycle treatments, such as separated multiuse path, separate bicycle lane, traditional bicycle lane, bicycle boxes, and bicycle signal treatments as well as unique bicycle signal phases at intersections.

**SE 1st St. Corridor Improvements; Vancouver, WA (2013-2021).** Hermanus managed the transportation analysis and access management evaluation that informed the design process of the SE 1st St. improvements. Special design considerations included separated bicycle and pedestrian facilities, and five signalized protected intersections (first in the city) as well as a multilane roundabout. The project team developed signal phasing and timing options as part of the signal design at these intersections, ensuring that all detection and display options had been considered for pedestrians, bicycles, and vehicles based on local policies and standards, as well as considering national trends.

**West Burnside Multimodal Study & Preliminary Design; Portland, OR (2015-2020).** The City of Portland retained Kittelson to lead the West Burnside Multimodal Study with the goal of improving north/south bicycle connections across West Burnside. Hermanus served as principal engineer, overseeing the development of three alternative concept designs to add bicycle facilities and pedestrian crossings in this high demand area in Portland. Each concept addressed project objectives of providing pedestrian and bicycle facilities, place-making, enhancing safety, and slowing vehicle speeds, while balancing project impacts. Kittelson led the evaluation of the alternatives through a neighborhood-based public engagement process, ultimately leading to the selection of a preferred concept. The preferred concept includes protected bike facilities, additional pedestrian crossings, and geometric improvements at key intersections. The project has been designed and constructed.



## RADU NAN, PE | ASSOCIATE ENGINEER



## EDUCATION

BS, Civil Engineering  
Information Technology,  
Rensselaer Polytechnic  
Institute

## YEARS OF EXPERIENCE

16

## LICENSES/CERTIFICATIONS

Professional Engineer: MA  
(#53256), AZ (#52014), FL  
(#70732), MD (#50857), PA  
(#PE086548), VA  
(#0402058343)

## AFFILIATIONS

- American Society of Civil Engineers, Member
- Institute of Transportation Engineers (Massachusetts Chapter), Member
- Association of Pedestrian and Bicycle Professionals, Member

Radu Nan is a skilled project manager with a diverse background in traffic engineering and functional design. He has expertise in multimodal traffic evaluation, planning, and facility design for people walking, biking, or driving. His project work spans signing and pavement making plans, intersection traffic control evaluations, functional design reports, and neighborhood traffic calming construction documentation. As the engineer of record on multimodal construction projects, he balances the constructability constraints with the traffic needs of every unique site without compromising the safety or access of vulnerable users to the public right-of-way. **Radu has 35% availability for this project.**

## PROJECT EXPERIENCE

**City of Boston Neighborhood Slow Streets; Boston, MA (2018-2021).** Kittelson holds an on-call contract with the City of Boston in support of its Neighborhood Slow Streets Program to develop innovative approaches to traffic calming. The program's goal is to reduce the number and severity of crashes on residential streets, lessen the impact of cut-through traffic, and add to the quality of life in neighborhoods. Radu was the engineer of record for the design of traffic reduction measures in eight neighborhoods zones throughout the City of Boston. He used his geometric design experience to develop a set of horizontal and vertical deflection street features that could be applied networkwide. Radu coordinate the construction documentation with the Public Works Department, the Boston Water and Sewer Commission, and local utilities. He supported staff from the Boston Transportation Department in front of the Public Improvement Commission and received approval for all eight plans. Radu also leads construction services for projects under construction or ready for acceptance.

**Westfield Main Street Pedestrian and Bicycle Design; Westfield, MA (2020-Ongoing).** Radu is the project principal for this sidewalk gap study and design along Main Street (US 20) in the City of Westfield. Radu is coordinating the project management activities with the MassDOT HQ PM and is allocating Kittelson resources that are passionate about multimodal transportation on this project. Radu is also coordinating the data collection, environmental documentation, and structural design activities with three subconsultants. He focuses on developing and maintaining realistic schedules that are up to date and account for external coordination factors, such as City outreach and utility coordination. Radu also sets a high bar for deliverable quality and uses a continuous checking system to track and address issues before submission milestones.

**Massachusetts Shared Streets and Spaces; Statewide, MA (2020-Ongoing).** Kittelson is providing technical assistance to municipalities for applications to MassDOT's Shared Streets and Spaces grant program. Radu led the development of concepts, including expanded pedestrian zones, one-way conversions, pedestrian crossings, and a two-way separated bike lane for Holliston and Uxbridge. He has also served as the project engineer, overseeing concept development for Lynn, Medford, Sterling, and West Stockbridge.

**Somerville By Design On-Call; Somerville, MA (2018-2019)** Kittelson is providing ongoing transportation engineering and planning services to the City of Somerville through the Somerville by Design program. Radu was the lead engineer for signing, pavement marking, and traffic signal modification plans along Broadway in Somerville. Radu and the Kittelson team delivered plans that implemented full-time bus lanes, transit signal priority, and protected bicycle lanes along a mile-long stretch of road. This corridor is a major transit connection to the Sullivan Square T stop and required quick design iterations to find the right balance between cyclists' safety, transit efficiency, and local traffic. Radu used BlueBeam Sessions to capture evolving priorities and keep track of design changes in a fast-paced project development. Separately, Radu assisted the City by developing new plans for Powder House Square. These plans transform a confusing intersection with multiple traffic controls into a single-lane, yield controlled traffic circle with protected bike lanes connecting all six intersecting streets.

## MARGARET KENT | PLANNER



Margaret Kent embraces the essential role of transportation in people's daily lives as a defining element of communities and as a public good. She has worked on transportation initiatives addressing environmental, equity, and health impacts of transportation and land use systems. As an implementation-oriented planner, Margaret enjoys weaving together quantitative and qualitative data, community engagement, visual communication, concept design, and close collaboration with engineering teams to advance transportation projects from lines on a map to reality. Her projects range from quick-build intersection redesigns to multimodal corridor studies and regional bicycle and pedestrian plans. Before pursuing her urban planning master's degree, Margaret spent five years in the education and environmental non-profit sectors. **Margaret has 35% availability for this project.**

### EDUCATION

- MCRP, Transportation, Georgia Institute of Technology
- BS, Environmental Studies, Oberlin College

### YEARS OF EXPERIENCE

4

### AFFILIATIONS

Young Professionals in Transportation (Boston Chapter), Vice Chair

### PUBLICATIONS

Kent, Margaret and Karner, Alex. Prioritizing low-stress and equitable bicycle networks using neighborhood-based accessibility measures, *International Journal of Sustainable Transportation*, 2018.

### PROJECT EXPERIENCE

**Lynn Bicycle and Pedestrian Network Plan; Lynn, MA (2018-2019).** Kittelson led the Bicycle and Pedestrian Network Plan for the City of Lynn to develop an extension of the Northern Strand Community Trail and a connective bicycle network. The project included a feasibility study and concept design of a shared-use path and on-street two-way separated bike lane connecting West Lynn neighborhoods with the Lynn Common, downtown, and the Lynn Shore. Margaret worked on the analysis and mapping, route alternatives evaluation, public engagement, design concept, and network plan. The planning process aligned state and grassroots efforts, setting the City of Lynn up to leverage the Northern Strand extension as an equitable resource for connecting neighborhoods to the downtown and the waterfront. The shared-use path segment has been constructed, and the state is advancing the separated bike lane through the design process.

**MassDOT Shared-Use Path Design Guide II; Statewide, MA (2017-Ongoing).** Kittelson is on the team writing the *Shared Use Path Design Guide*, which will inform the planning, design, and construction of shared-use paths in Massachusetts. Kittelson is leading the trail crossing and intersection design and performance measures chapters. Margaret's role includes conducting research, drafting written content, and participating in focus groups with stakeholders within the Massachusetts Department of Transportation (MassDOT) and the Department of Conservation & Recreation. The guide will recommend best practices for public engagement, planning, project development, and design of shared-use path facilities across the Commonwealth. Topics include planning for path users, project timelines, context sensitivity, environmental planning and permitting, right-of-way, utilities, programming and funding, and design of paths and crossings/intersections.

**Palisades Trolley Trail Feasibility Study; Washington, DC (2018-2020).** Kittelson led a study for the District Department of Transportation (DDOT) to determine the feasibility of a multi-use trail between downtown Georgetown and the Palisades and Foxhall neighborhoods in Washington, DC. Margaret worked on existing conditions mapping, analysis to inform the project Purpose and Need statement, public meeting graphics for five alignment alternatives, key crossing concepts, and trail termini connections to the street network, and the final report. The feasibility study informed DDOT's decision on which proposed trail segments to advance through construction.

**Water Street Bike/Ped Boulevard; Lancaster, PA (2018-2019).** Kittelson is leading the planning and design of a mile-long bicycle and pedestrian boulevard through downtown Lancaster on Water Street. Water Street is part of Lancaster's high injury network, and the goals of the project include creating a multimodal north-south connector through the city, slowing traffic, and reducing crashes for all modes. Issues along the corridor include constrained ROW, lack of signalized intersections, frequent driveways, and adjacent industrial uses. Margaret was part of the team that completed the planning and concept design phase. She developed design concepts including curb extensions at four intersections, raised crosswalks, speed humps, and two off-road trail sections, and materials and activities for pop-up events and public meetings. Kittelson is currently helping to advance the project through the preliminary design phase.



## MEGAN MORROW | TRANSPORTATION ANALYST



Megan is a recent graduate of Tufts University, where she earned her master's degree in urban and environmental policy and planning as well as the Ann Urosevich Outstanding Student Award in Policy and Planning. Her love for transportation stems from a lifetime of active and multimodal commutes, ranging from a short walk to her first job in her rural Rhode Island hometown to a ride on one of the busiest bus routes in northern Europe to her school in Copenhagen. Currently, Megan enjoys a five-mile ride to the office on her electric bike. Prior to starting full-time at Kittelson, Megan worked at Superpedestrian and spent a summer as a Kittelson intern in the Oakland office. Megan works on a variety of projects, with a focus on geospatial analysis, equitable transportation access, and active transportation. She looks forward to exploring additional areas in the field. **Megan has 40% availability for this project.**

### EDUCATION

- MA, Urban and Environmental Policy and Planning, Tufts University
- BA, Global Environmental Change and Sustainability, The Johns Hopkins University

### YEARS OF EXPERIENCE

1

### PROJECT EXPERIENCE

**FDOT Ped/Bike Strategic Safety Plan; Statewide, FL (May 2021-Ongoing).** The Kittelson team is preparing a statewide strategic plan to evaluate, analyze, and promote the implementation of safety strategies with the goal of reducing pedestrian and bicyclist fatalities and serious injuries. Megan is conducting stakeholder engagement, creating graphics, and developing the plan framework, goals, and objectives.

**Boston Traffic Safety and Design On-Call; Boston, MA (December 2020-Ongoing).** The Kittelson team is addressing community safety and transportation concerns with short-term, tactical implementations at sites across the City of Boston with short-term tactical implementations. Megan is performing field reviews and developing concept designs and installation guides using CAD software.

**Egleston Square Redesign; Boston, MA (September 2020-Ongoing).** The Kittelson team is conducting a multimodal needs assessment in the Egleston Square neighborhood and providing recommendations for tactical improvements and permanent design changes with a focus on people walking, biking, and taking transit. Megan is conducting the existing conditions analysis and needs assessment process, preparing project visuals for use in community engagement, analyzing existing and future traffic operations, and preparing concept designs using CAD software.

**Bike & Ped Treatment Outreach; Statewide, VA (July 2020-Ongoing).** The Kittelson team is developing a website for bicycle and pedestrian treatments to assist in public facing communication. Megan is developing the framework and template for web pages, compiling information for each treatment, and creating graphics.

**Massachusetts Shared Streets and Spaces Technical Assistance; Statewide, MA (June 2020-Ongoing).** Kittelson is providing technical assistance to municipalities for applications to MassDOT's Shared Streets and Spaces grant program. The \$1.3M grant program will provide grants ranging from \$5,000 to \$300,000 to cities and towns in across the Commonwealth to quickly implement transportation and public realm projects that support physical distancing and economic recovery during the COVID-19 pandemic. Megan is preparing project cost estimates, designing plan view and cross-section graphics using Illustrator and CAD software, and analyzing performance metrics at project sites.

**FDOT D5 Bicycle and Pedestrian Master Plan; Statewide, FL (June 2020-Ongoing).** The Kittelson team is preparing a district-wide Master Plan to outline preferred bicycle and pedestrian infrastructure in FDOT's District Five. identify and prioritize projects that will improve and expand the district's multimodal transportation network. Megan is performing data collection, analyzing existing conditions using GIS, coordinating public engagement, and preparing reports and presentations for the client.

**FDOT D5 General Technical Review and Support; Districtwide, FL (June 2020-Ongoing).** The Kittelson team is performing a screening analysis to identify ideal locations to design and implement a protected intersection. Megan is using GIS to screen the roadway network for top locations and preparing concept sketches of intersection designs.

# JACKSON LYNCH | TRANSPORTATION ANALYST



Jackson Lynch is a passionate transportation analyst with two years of experience in the transportation engineering field. Since entering the transportation field full-time, he has assisted in design efforts across New England to help improve safety for people walking, biking, taking transit, and driving. His project work has included signing and pavement marking plans, Functional Design Reports, and traffic management plans on projects throughout the State of Massachusetts and the City of Boston. **Jackson has 40% availability for this project.**

## PROJECT EXPERIENCE

**MassDOT Complete Streets On-Call; Statewide, MA (2017-Ongoing).** Kittelson holds an on-call design, engineering, and technical support contract with the Massachusetts Department of Transportation (MassDOT) in connection with the State's Complete Streets Program. As part of this contract, Jackson has provided complete streets review to ensure that MassDOT roadway projects are following MassDOT's current engineering directives and ADA standards. He analyzes various projects across the state to assess if they are meeting the needs of pedestrians, bicyclists, and transit users. Additionally, he has worked on a sidewalk installation project in Westfield. He assisted in the traffic analysis, alternatives analysis, traffic management plan production and Functional Design Report.

**Somerville By Design On-Call; Somerville, MA (2017-2020).** Jackson assisted in several design projects for Kittelson as part of an on-call with the City of Somerville. He drafted the design for separated bike lanes along Wellington Bridge, including a set of bike ramps that connect bicyclists from the on-street bike lanes to off-street facilities. Additionally, he assisted in the redesign of the intersection of Mystic Avenue and Shore Drive. He created traffic management plans for this project that included bike ramps, a raised crossing, updated signal infrastructure, and median reconstruction. He also provided construction quantities and estimates.

**Boston Traffic and Safety Design On-Call; Boston, MA (2020-Ongoing.)** Kittelson provides Traffic Safety and Design On-Call services for the Boston Transportation Department. This contract addresses 311 and other local safety-related community requests through quick-build design. These designs consist of striping and signing, flex post installation, and minor curb work. Jackson has assisted in the alternative analysis, survey, and final design for several of these sites around Boston.

**Solomon Foundation Greenways On-Call; Statewide, MA (2020-Ongoing).** Working with public and private partners, the Solomon Foundation identifies projects that will significantly improve Greater Boston's major public parks and greenways. Through this On-Call, Kittelson provides preliminary services for greenway and trail planning and design. Jackson has assisted in the preliminary concept analysis for shared use path alternatives that compared safety, cost effectiveness, and operations.

**Massachusetts Quick-Build Street Design; Statewide, MA (2020-Ongoing).** Kittelson has provided technical assistance to municipalities for applications to MassDOT's Shared Streets and Spaces grant program. Jackson assisted in the development of conceptual designs including pedestrian crossings, separated bike lanes, contra-flow bike lanes, and dedicated transit spaces for Lynn, Medford, Fall River, and Townsend. He created concept alternatives, striping and signage plans, and quantities and estimates for these projects across the state.

**Templeton Roundabout Design; Templeton, MA (2018-Ongoing).** Kittelson partnered with Weston & Sampson Engineers through their MassDOT MSA to complete the scoping documents and construction plans for a five-leg roundabout in the Town of Templeton at the request of District 2. Jackson assisted with the pavement markings and signing plans, lighting plans, and traffic management plans, including the construction phasing for the design package. He also provided construction quantities, estimates, and special provisions related these three main areas.

## EDUCATION

- BS, Civil Engineering, Northeastern University
- MS, Civil Engineering, Northeastern University

## YEARS OF EXPERIENCE

2 (including internships)  
<1 (full-time employment)

## AFFILIATIONS

- American Society of Civil Engineers, Member
- Young Professionals in Transportation, Boston Chapter, Member



## BRIDGER HELM | TRANSPORTATION ANALYST



## EDUCATION

BS, Civil Engineering, University of Wyoming

## YEARS OF EXPERIENCE

1

Bridger Helm recently graduated from the University of Wyoming with a bachelor's degree in civil engineering. While in school, he explored a variety of transportation topics, including public transportation, traffic operations, geometric design, and pavement operations. Through an internship with the Wyoming Department of Transportation (WYDOT), Bridger gained experience in highway geometric design and traffic analysis. **Bridger has 40% availability for this project.**

## PROJECT EXPERIENCE

**Coral Gables Zone 1 Traffic Calming Design; Coral Gables, FL (2020-Ongoing).** Kittelson is leading the design of traffic calming devices, including speed humps, speed tables, and traffic circles. The Kittelson team is providing engineering analysis, concept design, public engagement, construction plans, specifications, and estimate services. As the project analyst, Bridger has developed conceptual design packages used for public engagement activities, as well as developed final construction documents and estimates for 50 sites.

**73rd Avenue Active Connections to Transit Grant Development; Oakland, CA (2020).** Kittelson held an on-call contract to develop an ATP grant application for the City of Oakland to improve bike and pedestrian access to major transit along a 2-mile stretch of the 73<sup>rd</sup> Avenue Corridor. The Kittelson team provided engineering analysis, concept design, estimate, and application services while assisting city staff in community engagement efforts. Bridger worked closely with city staff in the development of a concept design that implemented; bus boarding islands, bicycle paths, bicycle lanes, protected bicycle intersections, and curb bulb-outs. He also developed engineering estimates for the grant application.

**67th Avenue Bike Lanes, Myrtle Avenue to Cholla Street; Glendale, AZ (2020).** Kittelson led the concept design for the implementation of bicycle facilities on a two-mile section of the 67<sup>th</sup> Avenue corridor in Glendale, AZ. The Kittelson team developed conceptual plans and estimates for implementing bicycle pathways and bicycle lanes on a five-lane arterial. Kittelson also developed a feasibility report for the implementation of the conceptual design. As an analyst on the project, Bridger developed the conceptual design and estimates in communication with the team lead and city staff.

**Boston Department of Transportation Traffic and Safety On-Call; Boston, MA (2020-Ongoing).** Kittelson holds an on-call contract to provide design support for 311 requests. The Kittelson team is developing engineering analysis, concept design, public engagement, construction plans, and implementation guides for 30 sites within Boston Transportation Department jurisdiction. As a project analyst, Bridger developed a concept design, construction plans, and implementation guide for one site. The design involved implementing traffic calming techniques to reduce vehicle speeds along a residential corridor.

**Maryland Avenue Active Transportation Improvements; Glendale, AZ (2021-Ongoing).** Kittelson is leading a concept design to enhance the City of Glendale's bicycle network and fill existing sidewalk gaps in the project vicinity. The Kittelson team is developing concept design alternatives in coordination with city staff to provide bicycle continuity between the City of Glendale's and City of Phoenix's existing bicycle infrastructure. As a project analyst, Bridger developed concept designs and estimates for future use in the city's CIP.

## RONALD S. HEADRICK, RLA | SR. LANDSCAPE ARCHITECT



Ron Headrick's experience encompasses numerous facets of landscape architecture, site planning, and engineering from conceptual design through construction documents. He has been instrumental in implementing landscape designs that integrate existing features, new development, and aesthetic concerns. Ron has been involved with numerous public and private sector clients for recreational parks, pedestrian paths, access roads, highways, corporate headquarters, and retail centers. Through a special independent project in Genoa, Italy, he studied historic spatial design. **Ronald has 15% availability to work on this project.**

## PROJECT EXPERIENCE

**Bruce Freeman Rail Trail Design - Phase 2B; Acton/Concord, MA (2017-2019).** As a landscape architect, Ron provided final design plans for Phase 2B of the Bruce Freeman Rail Trail (BFRT), beginning at the terminus of Phase 2A in Acton and connecting to the northerly terminus of Phase 2C just north of Commonwealth Avenue in Concord. The new rail trail will run in a north-south direction and cross over Route 2, just after crossing the Acton/Concord town line and then Nashoba Brook just south of Route 2. The project includes replacing the bridge over Nashoba Brook, a new bridge over Route 2, and a new wildlife culvert crossing under Route 2. Responsibilities included invasive plant management measures and landscape plantings.

**Bradford Rail Trail Design and Construction; Haverhill, MA (2014-2017).** As project manager/lead designer, Ron provided construction phase services for this ¾-mile trail along the Merrimack River in the Bradford section of Haverhill. The project included a 10-foot-wide trail, local street connections, lighting, landscaping, and a compensatory storage area for floodplain impacts. Responsibilities included construction meeting attendance, response to contractor questions, and shop drawing reviews.

**MassDOT Shared-Use Path Planning & Design Guide (SUPPDG); Statewide, MA (2019-Ongoing).**

As project manager, Ronald provided peer review input to the SUPPDG team regarding the overall planning process, with particular emphasis on implementation and context sensitivity of shared-use paths. His responsibilities include reviewing, writing, and editing document chapters.

## PUBLICATIONS

*Boardwalk Renovation Enhances Waterfront Town.* Government Engineering Magazine, 2004

*More Than Meets The Eye: Tips for managing the lesser-known challenges of rail-trail projects.* Parks & Rec Business, February 2016

## EDUCATION

BLA, Landscape  
Architecture, State University  
of New York, Syracuse

## YEARS OF EXPERIENCE

35

## LICENSES/CERTIFICATIONS

Registered Landscape  
Architect: MA (#1072), CT  
(#662), RI (#394)

## AFFILIATIONS

- Boston Society of Landscape Architects, Member
- American Society of Landscape Architects, Member



# MICHAEL J. SHUSTACK, PE | STRUCTURAL ENGINEER



Mike Shustack is a project manager and structural engineer with experience in bridge design, ratings, and construction services. His responsibilities have included the review and production of plans, specifications, and construction estimates. He has also conducted field investigations. **Mike has 15% availability to work on this project.**

## PROJECT EXPERIENCE

**Bruce Freeman Rail Trail Design - Phase 2B; Acton/Concord, MA (2018-2020).** As a structural engineer, Mike provided the final design plans for Phase 2B of the Bruce Freeman Rail Trail (BFRT) for advertisement by MassDOT. BFRT Phase 2B begins at the terminus of Phase 2A near Teamworks Acton and continues in a southerly direction approximately 4,675 feet to the northerly terminus of Phase 2C, which is approximately 380 feet north of Commonwealth Avenue. About 1,450 feet of the trail is in Acton and 3,225 feet of the trail is in Concord. The new rail trail runs in a north-south direction and crosses over Route 2 and Nashoba Brook. Work includes replacing the bridge over Nashoba Brook, a new bridge over Route 2 and a new wildlife culvert crossing under Route 2. Responsibilities include bridge design calculations; production of bridge plans, specifications, and estimates for the bridge over Nashoba Brook and the wildlife crossing; and shop drawing review.

**Bruce Freeman Rail Trail – Phase 2C; Concord, MA (2013-2018).** As a structural engineer, Mike provided the design of an 85-foot pedestrian truss bridge and a precast concrete arch pedestrian tunnel as well as rehabilitation of an existing railroad bridge for phase 2C of the project. The concrete arch utilized accelerated techniques to limit the road closure duration to 60 days. Responsibilities included preparation of bridge type selection reports, design and detailing, development of specifications and estimates, and construction services for the two bridges and the culvert for Phase 2C of the project. This project received the AWP Small Cities/Rural Communities Project of the Year Award in the \$5-\$25 million division.

**Assabet River Rail Trail Design; Acton/Maynard, MA (2014-2017).** As a structural engineer, Mike provided final design services for the 3.4-mile Assabet River Rail Trail. The cross section included a new variable width paved asphalt multi-use rail trail with two-foot stabilized shoulders, trail pavement markings and signing, a passively actuated flashing beacon at the trail/Route 117 crossing, new roadway pavement markings and signing at trail crossings, construction of two pre-fabricated pedestrian bridge structures over Mill Pond and Assabet River, a boardwalk, culverts, earthwork, landscaping, screening, retaining walls, and other items incidental to the construction of the rail trail. Responsibilities included preparing bridge type selection for two bridges and the boardwalk, structural and geometry calculations for the bridge and boardwalk, plan production, estimating, and construction services.

**Mohawk Bicycle/Pedestrian Trail Design; Williamstown (2015-Ongoing).** As a structural engineer, Mike provided preliminary and final design services for the 6.5-mile Mohawk Bicycle/Pedestrian Trail. Work included a new paved asphalt multi-use trail with two-foot stabilized shoulders, trail pavement markings and signing, actuated flashing beacon at one crossing, new roadway pavement markings and signings at crossings, construction of a pre-fabricated pedestrian bridge, a precast concrete boardwalk, a four-sided box culvert, capping of landfills, parking areas, earthwork, landscaping, screening, and retaining walls. Additionally, Mike worked with the town to develop a preliminary conceptual design, design and detailing of the pedestrian bridge and boardwalk plans, and production of specifications and estimates.

## EDUCATION

- MSE, Civil Engineering: Structural, University of Massachusetts, Lowell
- BS, Civil Engineering, University of Massachusetts, Lowell
- BS, Building Construction Technology, University of Massachusetts, Amherst

## YEARS OF EXPERIENCE

9

## LICENSES/CERTIFICATIONS

2018/Professional Engineer/MA #53812

## AFFILIATIONS

- American Society of Civil Engineers (ASCE)
- Boston Society of Civil Engineers (BSCE)

## NICOLE ROGERS, PE | CIVIL/LIGHTING ENGINEER



Nicole Rogers is a project manager in GPI's transportation group, playing both the role of traffic engineer and GIS analyst. Her experience includes field inventory and assessment, optimization of traffic signals, conceptual street design, preparation of traffic operations reports, truck exclusion studies, traffic calming and planning studies, and road safety audit reports. Since joining GPI, Nicole has used and developed innovative GIS applications in support of transportation planning and engineering assignments. In addition to using GIS data for project data analysis and mapping, she has developed unique applications for bus route optimization and the integration of asset management systems through means of geodatabase development and implementation. She has completed and overseen mobile data collections and data integration efforts for many of GPI's projects. **Nicole has 20% availability to work on this project.**

### PROJECT EXPERIENCE

**Pedestrian Safety Audit; Needham, MA (2018-2019).** This project aimed to identify high pedestrian demand areas and recommend safety speed zones where vulnerable road users may be present. As project manager, Nicole was responsible for creating and deploying a GIS mobile data collection application to inventory all pedestrian crossing locations in the town. She also created an online database to evaluate all public comments and prioritize locations of public concern. Utilizing GIS tools and a priority matrix based on vehicle speeds, roadway classification, crash data, and pedestrian demand, Nicole identified the top 10 high-risk pedestrian crosswalk locations. She also developed conceptual-level improvement plans for each crosswalk location, including various crossing treatments (such as rectangular rapid flashing beacons (RRFB), in-pavement lighting, ADA wheelchair ramps, and high-intensity activated crosswalk beacons (HAWK)). Additionally, Nicole developed a toolkit of potential pedestrian crossing treatments for the town to implement as funding becomes available. This project, in conjunction with the Needham town-wide street lighting assessment, was selected by MassDOT to present at the MassDOT 2020 Innovation Conference.

**NH Statewide Rail Trail Plan; NH (2020).** As a traffic engineer/GIS analyst, Nicole completed an update to the 2005 state trails plan focusing on the planning, operation, and improvement of the state's rail trails. The purpose of this plan is to ensure preservation and integrity of the state-owned rail corridors; provide direction for future development; define the role of the DOT in the preservation of state-owned rail corridors; determine the best way to maximize the return on investment in rail corridor assets; and determine how to engage towns, cities, and private rail trail organizations in these efforts. Nicole's responsibilities included development of an interactive GIS web application and a project-specific website as well as updating the statewide rail trail GIS database to reflect current conditions.

**Downtown Wayfinding Signage Package; Nashua, NH (2016-2017).** As project manager, Nicole developed a wayfinding sign package to guide visitors from adjacent highways to local amenities and parking locations as well as to transitions to a pedestrian-scale system of signs and kiosks to promote the culture and resources of the downtown area. The project involved a detailed inventory and assessment of the existing wayfinding signage as well as a review of existing and future traffic patterns and routes into the downtown area. Utilizing GIS mapping and collector tools to inventory the existing signage, Nicole highlighted desired landmarks and resources along with illustrated proposed locations and types of new wayfinding signs. She was also responsible for the preparation of construction documents, a graphics specifications manual, cost estimating, bid documentation, and a GIS geodatabase depicting all existing and future signage. Additionally, Nicole conducted an extensive outreach program to gauge public interest early in the project through means of website and social media production/upkeep as well as in-person and online surveying.

### EDUCATION

BS, Civil Engineering, University of Vermont

### YEARS OF EXPERIENCE

7

### LICENSES/CERTIFICATIONS

Professional Engineer: MA (#54972)

### AFFILIATIONS

Women's Transportation Seminar (WTS), Member



## SAGE WINTER, ASLA, PLA | LANDSCAPE ARCHITECT



Sage Winter joined GPI after earning her master's in landscape engineering at the Czech University of Life Sciences. She spent more than four years studying abroad, where she researched historical landscapes in pursuit of a PhD in applied landscape ecology. This allowed Sage to gain an international perspective on landscape designs. At GPI, Sage is a key team member assisting with landscape design, AutoCAD, GIS, and graphic production elements on various projects. **Sage has 25% availability to work on this project.**

### PROJECT EXPERIENCE

**Improvements to Route 12 & Twin Cities Rail Trail; Leominster, MA (2019-Ongoing).** As a landscape architect, Sage is working on evaluation and final design of Route 12 (North Main Street) for approximately 0.4 miles. Roadway work includes the improvements of signalized intersections and traffic signal coordination with the three signalized intersections to the north. The involved Twin Cities Rail Trail segment is integral to the 4.7-mile trail. Sage ensured the continued character in this middle segment, which includes signature benches, trail markers, and other placemaking elements to create a unified design. The trail bisects a new park area, which presents a unique opportunity to provide a stormwater garden on a MassDOT project. Sage's responsibilities include a landscape planting plan and details, CAD drafting, and planting plan schedules.

**Wilton Riverwalk Phase II; Wilton, NH (2018-2019).** As landscape designer, Sage provided design services to develop plans for Phase II of the downtown riverwalk in Wilton. The project involved developing design alternatives and approaches for the different elements and sections of the riverwalk, such as extended and improved walkways, improved drainage, trees, decorative lighting, granite memorial benches, and other amenities. Sage's responsibilities included interpreting findings from a Plan NH design charrette and assisting in the master plan development using those guidelines, site analysis, developing the base map using ArcGIS, site visits and previous survey, assisting in a cost/benefit analysis of moving historical pony truss bridge to a downtown location, and identifying locations and opportunities for sustainable design and stormwater management.

**Bruce Freeman Rail Trail Phase 2B, Acton/Concord, MA (2017).** As a landscape designer, Sage provided final design plans (75%, 100%, PS&E) for Phase 2B of the Bruce Freeman Rail Trail (BFRT). BFRT Phase 2B is a rail to trail project beginning at the terminus of Phase 2A, continuing in a southerly direction approximately 4,675 feet to the northerly terminus of Phase 2C just approximately 380 feet north of Commonwealth Avenue. Approximately 1,450 feet of the trail are in Acton and 3,225 feet of the trail are in Concord. The trail will run in a north-south direction and crosses over Route 2 just after crossing the Acton/Concord town line and crosses Nashoba Brook just south of Route 2. The project includes replacing the rail trail bridge over Nashoba Brook and design of a new bridge over Route 2 and new culvert (Route 2 over wildlife crossing). Specific responsibilities include invasive species identification and mapping.

### PUBLICATIONS

Sluter, Sage & Brabec, Elizabeth. 2015. *Uncovering a Landscape: The Ingenuity and Integrity of the Baroque in Vale*

Sluter, Sage. 2014. *Analysis of the Historic Landscape of Vale*

### EDUCATION

- PhD Candidate, Applied Landscape Ecology, Czech University of Life Sciences
- MS, Landscape Engineering, Czech University of Life Sciences
- BS, Landscape Architecture, University of Massachusetts

### YEARS OF EXPERIENCE

3

### LICENSES/CERTIFICATIONS

Licensed Landscape Architect: ME (#5074)

### AFFILIATIONS

- American Society of Landscape Architects/ Boston Society Chapter, Member
- Plan NH, Member & Charette Committee

## REFERENCES

### REFERENCE #1 (KITTELSON)

#### MEAGHEN HAMILL, CHIEF OF STAFF

City of Lynn  
3 City Hall Square #311  
Office of the Mayor (Room 306)  
Lynn, MA 01910  
781.598.4000 x6857  
meaghen.hamill@lynnma.gov

#### REFERENCED PROJECT

##### LYNN BICYCLE AND PEDESTRIAN NETWORK PLAN (LYNN, MA)

*Project Cost: \$84,000*

The City of Lynn, Massachusetts, is the last leg of the Northern Strand Community Trail, a 10-mile shared-use path along an abandoned railbed. In addition to this coming investment by the state, there have been multiple grassroots efforts within the community that aim to implement multimodal improvements and better connectivity among in-town neighborhoods. The Lynn Walking and Bicycling Network Plan bridges these two scales and ties in with the state-led effort of connecting five communities through the Northern Strand Community Trail (Northern Strand).

Coordinating with separate but parallel efforts by the Executive Office of Energy and Environmental Affairs (EEA), Kittelson developed the Lynn Walking and Bicycling Network Plan (Network Plan), which integrated both regional and local scale planning efforts, assessed route alternatives, identified the preferred route for the Northern Strand in Lynn, and provided design concepts for multimodal improvements for the coastal town of Lynn. The Network Plan was produced through a series of interactive multi-day public workshops, web-based engagement, and continuous feedback garnered from social media postings, face-to-face interactions, and responses.

The Network Plan is a 'blueprint' for current and future planning efforts to improve the walkability and bikeability of Lynn. The Network Plan informs continued infrastructure efforts by the City to support the communication of deliberate planning and implementation through both public and private investment in Lynn. At this stage, the Network Plan focuses on a two-way separated bicycle facility through Lynn with the terminus at Lynn Shore & Nahant Beach Reservation. Tied to this proposal are pedestrian treatments, such as raised crosswalks, a bicycle traffic light on the intersection of Market Street and Lynnway, and recommendations for traffic calming and expanding the network for multimodal connectivity.

### REFERENCE #2 (KITTELSON)

#### MICHAEL TREPANIER, SENIOR PROJECT MANAGER, MASSDOT

Massachusetts Department of Transportation (MassDOT)  
10 Park Plaza  
Boston, MA 02116  
617.973.7341  
michael.trepanier@dot.state.ma.us

#### REFERENCED PROJECT

##### MASSDOT SHARED-USE PATH DESIGN GUIDE II (STATEWIDE, MA)

*Project Cost: \$191,000*

MassDOT, in cooperation with the MassTrails program, is developing a Shared Use Path Planning & Design Guide to inform the planning, design, and construction of shared use paths in MA. Kittelson is a subconsultant on the team developing the guidance content. Kittelson led the development of the Shared Use Path Planning Primer, an initial publication which helps technical and non-technical audiences learn how to propel shared use path projects from vision to reality by demystifying the steps of planning, designing, funding, and constructing shared use paths.

The project team is currently developing the full guide, which will include the following topics: shared use path benefits to communities; planning process; design and construction, including cross section, geometry, traffic control, intersections and crossings, structures, and landscape design; performance evaluation. Kittelson is leading the development of the intersection and crossing design and performance evaluation sections and is building on shared use path benefits research conducted as part of a separate contract with MassDOT. During the course of this project, the MassTrails inter-agency team was formed, MassDOT guidelines on publication formatting were updated, and the project team has coordinated with the concurrent development of multiple other guidance documents, including an update to the MassDOT Project Development and Design Guide. The project team has maintained momentum by prioritizing collaboration with the client and prime and through a flexible and nimble document development process.



### REFERENCE #3 (KITTELSON)

#### MICHELLE MOON, GREENWAY COORDINATOR OF THE EAST BOSTON GREENWAY

Civic Space Collaborative on behalf of Mystic River Watershed Association  
20 Academy St., Suite 306  
Arlington MA 02476  
320.282.7708  
michelle@civicspacecollaborative.org

### REFERENCED PROJECT

#### WINTHROP GREENWAY FEASIBILITY STUDY (WINTHROP, MA)

*Project Cost: \$85,000*

Kittelson is leading a feasibility study in East Boston and Winthrop, Massachusetts, which seeks to recommend a preferred route alignment for the extension of the Mary Ellen Welch Greenway from Constitution Beach in East Boston to Orient Heights MBTA Station and into Winthrop. The Greenway Extension will provide a critical multimodal connection between these two communities which are currently separated by the Belle Isle Inlet and can only be accessed along a busy arterial. The project will assess three primary route options and recommend a preferred alignment based on evaluations of each route based on community-driven goals. This project includes engagement with community groups, residents, and relevant agencies and property owners; this outreach has included a site walk, a survey that reached over 500 people, project updates at Greenway Council meetings, an on-site event at multiple locations throughout the study area, interviews with agency stakeholders, community and agency/property owner focus groups, and direct outreach to neighborhoods.

### REFERENCE #4 (GPI)

#### JOHN PETTIS, III, PE, CITY ENGINEER, CITY OF HAVERHILL

City of Haverhill  
Engineering Division  
City Hall, Room 300  
4 Summer Street  
Haverhill, MA 01830-5885  
978-420-3708  
jpettis@cityofhaverhill.com

### REFERENCED PROJECT

#### BRADFORD RAIL TRAIL (HAVERHILL, MA)

*Project Cost: \$2,300,000*

This ¾-mile trail along the Merrimack River in the Bradford section of Haverhill included a 10-foot-wide trail, local street connections, lighting, landscaping, and a compensatory storage area for flood plain impacts. GPI's project manager led a design team from 2012-2016 that worked with the City of Haverhill, MassDOT, and the Friends of the Bradford Rail Trail Committee to develop a comprehensive design responding to the site's context and challenges. The project followed our project manager to GPI, who provided construction phase services that included shop submittal reviews, response to contractor inquiries, and attendance at construction meetings.

## OTHER INFORMATION

Kittelson and GPI are excited to partner with the Town of Arlington to realize the Minuteman Bikeway's potential as an attractive, friendly, and vital part of Arlington's transportation system.

## FORMS

The following signed forms are located throughout pages 37-38.

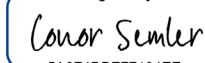
- Non-Collusion Form
- Tax Compliance Form

## INSURANCE

Kittelson's Certificate of Insurance is located on page 39.

**CERTIFICATE OF NON-COLLUSION FORM  
TOWN OF ARLINGTON  
MINUTEMAN BIKEWAY PLANNING PROJECT**

The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

DocuSigned by:  
  
5A6F4DBE77134EE  
Signature of individual Submitting Bid or Proposal

**Conor Semler, Associate Planner & Authorized Signer**

Name of Individual Submitting Bid or Proposal

**Kittelson & Associates, Inc.**

Name of Business

**June 1, 2021**

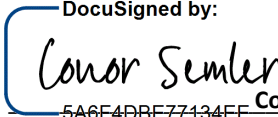
Date

BY STATE LAW THIS NON-COLLUSION FORM MUST BE SIGNED AND SUBMITTED WITH THE BID OR PROPOSAL.



**CERTIFICATE OF TAX COMPLIANCE FORM  
TOWN OF ARLINGTON  
MINUTEMAN BIKEWAY PLANNING PROJECT**

Pursuant to MGL Chapter 62C, Section 49A, I certify under the penalties of perjury that I have complied with all laws of the Commonwealth of Massachusetts relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

	DocuSigned by:
	
<u>93-0964447</u>	<u>Conor Semler, Associate Planner</u>
Social Security Number or	Signature and Title of Individual or
Federal Identification Number	Responsible Corporate Officer

BY STATE LAW THIS CERTIFICATE OF TAX COMPLIANCE FORM MUST BE SIGNED AND SUBMITTED WITH THE BID OR PROPOSAL.

Client#: 763494

KITTEASC

**ACORD**<sup>TM</sup>**CERTIFICATE OF LIABILITY INSURANCE**

DATE (MM/DD/YYYY)

12/16/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer any rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> <b>USI Insurance Services NW PR</b> <b>601 Union Street, Suite 1000</b> <b>Seattle, WA 98101</b>	<b>CONTACT NAME:</b> Please See Below: <b>PHONE (A/C, No, Ext):</b> 206 441-6300 <b>FAX (A/C, No):</b> 610-362-8530 <b>E-MAIL ADDRESS:</b> Seattle.PLCertRequest@usi.com														
<b>INSURED</b> <b>Kittelson &amp; Associates, Inc.</b> <b>851 SW 6th Avenue, Suite 600</b> <b>Portland, OR 97204</b>	<table border="1"> <thead> <tr> <th>INSURER(S) AFFORDING COVERAGE</th> <th>NAIC #</th> </tr> </thead> <tbody> <tr> <td>INSURER A : Massachusetts Bay Insurance Company</td> <td>22306</td> </tr> <tr> <td>INSURER B : Hanover Insurance Company</td> <td>22292</td> </tr> <tr> <td>INSURER C : Allmerica Financial Benefit Ins. Co.</td> <td>41840</td> </tr> <tr> <td>INSURER D : XL Specialty Insurance Company</td> <td>37885</td> </tr> <tr> <td>INSURER E :</td> <td></td> </tr> <tr> <td>INSURER F :</td> <td></td> </tr> </tbody> </table>	INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A : Massachusetts Bay Insurance Company	22306	INSURER B : Hanover Insurance Company	22292	INSURER C : Allmerica Financial Benefit Ins. Co.	41840	INSURER D : XL Specialty Insurance Company	37885	INSURER E :		INSURER F :	
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INSURER D : XL Specialty Insurance Company	37885														
INSURER E :															
INSURER F :															

**COVERAGES****CERTIFICATE NUMBER:****REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> WA Stop Gap  GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC OTHER:	X	X	ZD2D78128002	01/01/2021	01/01/2022	EACH OCCURRENCE \$1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$100,000 MED EXP (Any one person) \$10,000 PERSONAL & ADV INJURY \$1,000,000 GENERAL AGGREGATE \$2,000,000 PRODUCTS - COMP/OP AGG \$2,000,000 Stop Gap/EL \$1,000,000
C	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS NON-OWNED AUTOS ONLY	X	X	AW2D78128703	01/01/2021	01/01/2022	COMBINED SINGLE LIMIT (Ea accident) \$1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> EXCESS LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$0	X	X	UH2D78128102 (Follow Form)	01/01/2021	01/01/2022	EACH OCCURRENCE \$5,000,000 AGGREGATE \$5,000,000
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below		X	WM2D78128902	01/01/2021	01/01/2022	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$1,000,000 E.L. DISEASE - EA EMPLOYEE \$1,000,000 E.L. DISEASE - POLICY LIMIT \$1,000,000
D	Professional Liability Incl. Pollution		X	DPR9970040	01/01/2021	01/01/2022	\$5,000,000 per claim \$5,000,000 annl aggr.

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

**\*\*Please Note:** The limits shown above may not represent the full limits of coverage carried by the Named Insured, but are shown as evidence that coverage is carried with limits at least as high as is required by contract.\*\*

Proof of Insurance.

**CERTIFICATE HOLDER****CANCELLATION**

FOR INFORMATION PURPOSES ONLY

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

*John A. Ryan*

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